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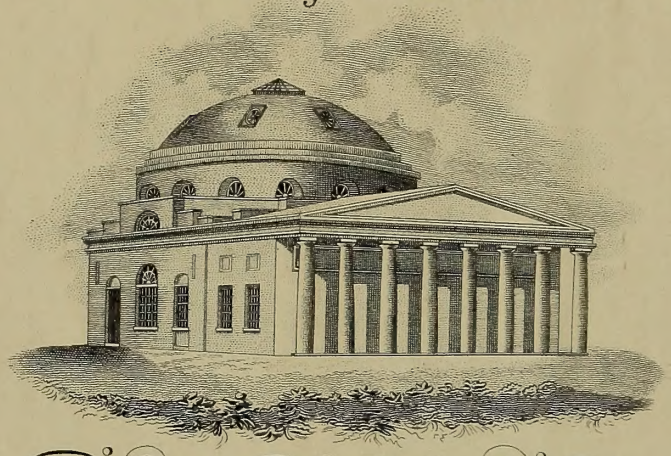

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1827. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were: Richard J. Berkey, Historical Librarian/Preservation Officer; Maria Milagros Pedraza, Metadata Management Librarian; Angela Cochran and Carol Hughes Gray, Resources Division; Sarah Hinrichs, Alan Salazar and Megan Wolff, Serials Division.

These dissertations were digitized in 2011-2012 and are available at the UM Digital Archive (archive.lib.umaryland.edu) and the Internet Archive (www.archive.org).

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(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1853 (b)

Author	Title	Notes
Seys, Henry H.	Anatomy of the Eye	(faded ink)
Robertson, Samuel H.	Blood	(faded ink)
Robinson, Charles Benjamin	Signs of Pregnancy	(ink bleeds)
Watts, John Stealey	Vis Medicatrix Naturae	(partially faded ink)
Tingle, Edwin McKnight	Eclampsia	(title page faded)
White, Alphonso Augustus	Cholera Morbus	
O'Donovan, Charles	Clinical Report of Six Cases	
Mitchell, George Alfred	Dysentery	(partially faded ink)
Lassell, William Henry	Quiniae Sulphas	
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Kidd, William Griffith	Clinical Report Consisting of Six Cases	
Philips, Samuel	Epidemic Cholera	
Lynch, John Stephen	Symptoms, Cause and Treatment of Intermittent Fever	(partially faded ink)

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

Author	Title
Taliaferro, Benjamin	Bile
Laney, Thomas M.	Typhoid Fever (Stained. Fragile pages)
Mitchell, Thomas Edward	Dysentery
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Harrow, John Washington	Erysipelas
Marshall, John Silas	Pericarditis
Rogers, Winston D.	Puerperal Fever
Brown, Roger Watson	Diagnosis

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UNIVERSITY OF MARYLAND

THESES

1853(b)

~~Leys~~ Leys, Henry H.	Anatomy of the Eye (faded)	32p.
Robertson, Samuel H.	~~On The~~ Blood (faded)	29p.
~~Robison~~ Robinson, Charles Benjamin	Signs of Pregnancy	16p.
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Adams, George Frederick	Cinchona and Its Preparations	17p.
Denny, ~~Wm.~~ William	Dyspepsia	29p.
Kidd, ~~Wm.~~ William G. Griffith	Clinical Report Consisting of Six Cases ~~Report of Cases-Six~~	30p.
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Laney, Thomas M.	Typhoid Fever	15p.
Mitchell, Thomas Edward	Dysentery	18p.
Martin, Andrew Jackson	Dysentery	26p.
Buckler, Riggin	Physiological and Pathological Relations of Uric Acid	23p.
Tidings, Edwin Randall	History of Seven Cases	52p.

Biscoe, W. Booker William	Peritonitis	25p.
Norris, ~~Wm.~~ Henry William	Opium	15p.
~~Harmon~~ Harrow, John Washington	Erysipelas	14p.
Marshall, John Silas	Pericarditis	31p.
Rogers, Winston D.	Puerperal Fever	19p.
Brown, Richard Watson	~~On~~ Diagnosis	32p.

An
Inaugural Dissertation
on the
Anatomy of the Eye
submitted to the examination
of the
Provost, Regents and
Faculty of Physic
of the
University of Maryland
for the degree of
Doctor of Medicine

by

Henry H. Sears

of

Maryland.

1853

IMB
18904

To my

Preceptor

as a token of his unspeakable, I would with
my highest feelings of gratitude respectfully dedicate my thesis.

Henry H. Seys.

The Anatomy of the Eye.

The eye is a subject, well worthy the attention of the Anatomist, the Physiologist, the Physician and the Surgeon. Interesting to the Anatomist, because of the beauty of its construction and the accuracy of its organization. To the Physiologist, because of the intricacy of the motions effected, in his solution. To the Physician inasmuch as it will afford him many valuable information, even beside the sick bed, both as it regards the disease under which his patient suffers, the probable termination of the malady (considering the condition of this organ, conjointly with the other symptoms of the case) and in no small degree will it be decided by facts well known to the initiated in the course

of his studies. But not only for these reasons, but on the [illegible] of the practitioner of medicine, for many and [illegible] diseases to which the eye is [illegible] which only the instruments of the surgeon can reach (and should not be [illegible] studied carefully by him!) and others which if properly understood and treated, can if not perfectly cured, lead to a far more happy termination than is left to the efforts of nature alone.

How therefore and potent are the reasons why all who make the healing art the business of their lives should devote no small share of their attention to this small not unimportant organ.

It would be impossible for me in a thesis of this character, to enter upon the whole field which the eye offers for consideration. Its anatomy alone, the subject which I have chosen, presents matter enough for my present purpose.

The eyes are situated in the upper portion of the face in two deep fossæ or orbits formed by the bones of the face and of the head. The orbits are hollow quadrilateral cones of size sufficient to contain not only the eye balls proper but their appendages consisting of the muscles, nerves, lachrymal gland & blood vessels. The axis of each is directed from behind, forward & outward from the median line, and if continued backward would meet about the middle of the sella turcica. Into their formation enters the orbital plate of the frontal, and the ~~[illegible]~~ wing of the sphenoid bone, above. Below the malar, superior maxillary & palatal bones. Internal wall is formed by the lachrymal, the ethmoid and the body of the sphenoid bones, while the outer or external wall consists of the malar and greater wing of the sphenoid. Into each orbit there are nine openings for the entrance and

exit of the lacunæ mucous blood vessels, and excretory ducts of the glands.

The globe of the eye (bulbus oculi) or as it is simply termed the eye, (situated in the above described cavity) is to be distinguished from the parts which protect it and the lachrymal apparatus. These it is not my purpose to describe and will therefore merely enumerate them. They consist of the eyebrows (supercilia) to each of which is attached a seperate muscle (corrugator supercilii). The eye lids, (palpebræ) closed by the orbicularis - while the upper is elevated by the levator palpebræ superioris, by which the eye is opened. Connected with these we have the eyelashes (cilia) Meibomian glands (glandulæ Meibomii) to. sal. cutaneous (tarsi) and the Caruncula lachrymalis - Composing the lachrymal apparatus we find the lachrymal gland (glandula lachrymalis) its excretory ducts, lachrymal canal & sinus at the puncta lachrymalia; the lachrymal

sac and the nasal duct

The conjunctiva the mucous membrane of the eye, is a thin delicate tissue covering the free surface of the lids and is reflected upon itself (forming the palpebral sinuses) and lines the outer and anterior surface of the sclerotica and cornea. Its character varies in different portions.

The part covering the eyelids is red, opaque, and highly vascular, its free surface being studded with fine papillæ. It enters the ducts of the meibomian glands, the excretory ducts of the lachrymal glands, and lining the lachrymal canal, lachrymal sac & the nasal duct it becomes continuous with the mucous membrane of the nostrils.

The sclerotic portion of the conjunctiva differs from the palpebral, inasmuch as but few branches of blood vessels are found in it, and it wants its papillæ. After its extension from the lids it possesses its luster, and becomes

transparent and nearly colorless.

That part of the conjunctiva covering the cornea is excedingly thin & transparent and adheres firmly to the cornea. Small blood vessels have not been traced into it.

The globe of the eye is located in the anterior portion of the orbit, and is retained in its position by the optic nerve behind, the eye lids anteriorly, the muscles by which it is moved and its blood vessels.

In front it is in contact with the lids, caruncula lachrymalis, & plica semilunaris; behind it is imbedded in a quantity of adipose tissue. The axes of the eyes are nearly parallel, except when certain muscles are in motion. Its movements are not very extensive or various.

The globe of the eye is formed of several concentric membranes, none of which completely invest it. Within these are the fluid portion or humours of the eye

The investing membranes are the sclerotica (cornea opaca) cornea (cornea pellucida) choroid (tunica vasculosa) retina, membrane of the aqueous humour, capsule of the lens and the hyaloid membrane. The form of the eye is that of a sphere, having a segment of a smaller sphere attached to its anterior surface, increasing its anterior posterior diameter. This in the adult is about one inch - exceeding the transverse diameter about a line. It is divided into an anterior and posterior portion, the latter being by far the larger. The former is divided again - into an anterior & posterior chamber -

Sclerotica

This is a firm; opaque, inelastic, white fibrous membrane, composed of several layers which may be separated from each other - but which are connected together by an interchange of fibres. It is said to cover about four fifths of the external surface of the eye. The part in front is occupied by the cornea - behind

to the entrance of the optic nerve. It varies somewhat in thickness - being about one line posteriorly, gradually decreasing until it reaches the edge of the cornea, where it does not exceed half a line. It is protected or strengthened by the insertion of the recti muscles it is thinner than between the points of their attachments. At the insertion for the entrance of the optic nerve, the fibrous sheath of the nerve is continuous with that membrane.

It is pierced not only by the optic nerve but by the ciliary nerves and arteries. Its outer surface is white & smooth, its inner rougher and darker - Many small vessels, ultimately distributed to the inner portions of the eye, are attached to its external surface some of which perforate it posteriorly, others nearer its centre, and proceed a greater or less distance within its substance.

The Cornea.

This is a transparent membrane covered upon its outer surface by the conjunctiva

cornea is firmly adherent to it; upon its inner face, by a thin closely adherent membrane by some anatomists considered as the proper membrane of the aqueous humour, but by others as merely an epithelium of that membrane. It forms the anterior and most prominent portion of the eye, occupying nearly one fifth of its surface. It is closely adherent to the free margin of the sclerotica, and is received into a groove formed for its reception in that membrane. Its external surface is convex and projects somewhat from the plane of the sclerotica. Its posterior or inner face is concave and forms the anterior boundary of the anterior chamber. Its circumference forms not an exact circle, having the transverse diameter rather longer than the vertical. The cornea in thickness exceeds the sclerotica and is composed principally of soft and indistinct fibres, arranged in several concentric strata" connecting these is a fine cellular tissue, basilar form, and containing

the liquor cornea

Choroid. [illegible] (the [illegible]) is a dark vascular membrane lying between the [illegible] and retina. [illegible] it is connected with sclerotica by a thin & delicate cellular tissue (membrana fusca) through which the ciliary nerves and vessels pass, and is back are ultimately distributed to the iris. By its internal face it is merely in contact with the retina. "That portion of the choroid which is in apposition with the sclerotica is of a "rich chocolate brown color" while the inner is nearly black [illegible] with [illegible] and [illegible] vessels."

It is pierced posteriorly by the optic nerve. is attached to the iris anteriorly, and by the ciliary processes is connected with the membrane of the vitreous humour. The ciliary ligament is the medium of the attachment between it and the line of junction of the cornea and sclerotica. Its connection with the retina is slight.

It is composed of three layers, [illegible]

minute ramifications of the arteries, veins, and nerves.

The outer layer is composed of numerous vessels which can be in a degree separated from the arterial layer. They are from three to six in circular arrangement & are known as vasa vorticosa. They converge to four points, about equal distance apart, and each pass between the sclerance of the optic nerve and the cornea and there pierce the sclerotica and empty into the ophthalmic veins. This lamina is in connection with the ciliary ligament.

The second or arterial layer is composed of the ciliary branches of the ophthalmic artery and by their ramifications form a net work of vessels upon the inner surface of the vasa vorticosa. This strata of the choroid has received the title of tunica Ruyschiana.

These are nearly parallel in their course, anastomose freely with each other and are ultimately distributed to the inner and villous surface of this tunic.

The external and last layer is "composed of fusiform of nucleated hexagonal cells which contain the granules of the pigmentum nigrum and are arranged in a beautiful dissected pavement." This pigmentum nigrum vel fuscum, is of a dark brown or black color, lining slightly the outer surface of the choroid, is most plentiful within, and is greatest in quantity near the anterior portion of the eye. It is contained and covered by the membrana of the pigment layer.

The ciliary ligament - Ligamentum ciliare v. annulus albidus v. annulus cellulosus, is a narrow, flat, circular band of "greyish white substance." It is the connecting medium between the external and inner coats of the eye. Anteriorly it presents the form of a wedge. It connects the sclerotic and corneal tunics at their point of union, by a narrow band of unyielding, whitish fibres to which the lens of the ciliary ligament is more particularly indispensable and is often used. Its attachment to the sclerotic

have at least a point of sight.

The thicker margin of the annulus albidus serves for a point d'appui for the iris and assists in bounding the cavity of the aqueous humour. By its thinner and posterior surface it is continuous with the choroid, from which it differs, inasmuch as upon it there is found none of the pigmentum nigrum and is much less vascular. The inner portion, which is much less distinctly fibrous than any other part, connects with the ciliary processes, and also receives the ciliary arteries and nerves, the former anastomosing freely with each other in its substance and then proceed to their ultimate destination, the iris.

Between the anterior surface of this ligament, the sclerotica and cornea is a small canal — the canal of Fontana from its discoverer.

The Iris

This is the septum which divides the anterior, from the posterior chamber of

It is composed of two layers – The anterior consisting of radiating muscular fibres converging from the periphery toward the centre. These radiating fibres by contracting dilate the circular opening found in the iris, situated not exactly in its centre but rather toward its inner or nasal side. This opening, the pupil is contracted by the action of the second layer, the fibres of which are arranged circularly around it.

The anterior surface of the iris looks toward the cornea, the posterior toward the crystaline lens. Its outer circumference is attached to the annulus albidus, while its inner or free edge forms the margin of the pupil.

This membrane varies much in color in different individuals and hence its name from iris – a rainbow – It hangs vertically in the aqueous humour – The posterior surface [illegible] is covered by a quantity of black pigment having

beneath a delicate transparent membrane, the uvea, resembling somewhat the membrana pigmenti of the choroid coat. The vessels of the iris are the [illegible] anterior [illegible]

The long ciliary arteries are two in number, and are derived from the ophthalmic [illegible] to the optic nerve and on each side of it. They pass beneath the sclerotica in the membrana fusca until they reach the ciliary ligament. When they have nearly reached the iris, they each divide into an upper & lower branch, and then anastomosing freely with each other, form the circulus major iridis, around the fixed edge of, and a little posterior to the iris. [illegible] branches, [illegible] the edge of the iris and there by anastomosis [illegible] the circulus major. The course of the two main branches is horizontally forward and corresponds

nearly with the axis of the eye.

There are several anterior ciliary arteries smaller than the long ciliary, and are derived from the muscular and [illegible] arteries of the orbit. They pass through the sclerotica just posterior to the cornea and finally enter into the circulus major.

But besides these, there are other branches enter the iris from the ciliary processes.

The veins of the iris are arranged similarly to the arteries and appear to communicate with the canal of Fontana.

The nerves of the iris are large in number there being about twenty, and are derived from the "lenticular ganglion and the nasal branch of the ophthalmic division of the fifth nerve." They have received the title of ciliary. Before entering the iris they [illegible] in the substance of the ciliary ligament. They are in direct association to the [illegible] with [illegible]

near the aperture for the admission of the optic nerve, between the sclerotica and choroid and may be seen lying upon the surface of the latter and appear to be embedded in grooves upon the inner face of the former membrane

Within the substance of the annulus albidus they divide very minutely, a few branches being lost in this ligament, the rest ramify on the iris.

(The ciliary processes (corpus ciliare) consist of numerous folds (some sixty or seventy in number) a continuation of the vascular constituents of the choroid, commencing at the ora dentata a dentated line, bounding the anterior portion of the tunica vasculosa and covered with a dark brown or black pigment. These folds extend inward) toward the posterior surface of the iris and anterior to the vitreous humour. The circumference of the corpus ciliare is attached to the

Ciliaris albidus, while the central border is free and in contact with the posterior part of the lens. The folds of these processes digitate with the radiating fibres of the zonula ciliaris.

The ciliary processes differ in length, being divided into the long & short, and are extremely vascular. Their vessels are derived from the anterior part of the choroid. "At the ora dentata several small vessels enter each ciliary process." These at first are parallel with each other in their course, and but infrequently anastomose. After entering however the larger folds they become tortuous, and then communicate freely [illegible]; and after forming loops or arches return their blood into the venous radicles.

"On the free border of the fold, one artery, [illegible] than the rest, extends the whole length of each ciliary process, [illegible]

19.

communicates with a long venous trunk, which runs a similar course, on the [illegible] side of [illegible]

The Retina

[illegible] and [illegible] lining of the eye and is "prolonged forward to the [illegible] of the Corpora Ciliaris" This is a delicate and in the living subject transparent membrane continuous with the optic nerve, extending almost to the lens, upon the inner surface of the Choroid. It is lined by the hyaloid membrane. And consists of three layers viz: an external - middle & internal

The external or "rods" membrane is delicate and presents the appearance of a mere film when newly dissected except known in water. When examined by the microscope it exhibits cells arranged in a regular form.

The middle or nervous layer is formed by the expansion of the optic nerve,

and terminates [illegible] of the ciliary process.

It is semi-transparent, thin and bluish white in color. It is upon the integrity of this tunic, the retina that the capability of the eye, to receive and be affected by the impression of light depends. The tubular fibres of the optic nerve diverge from this opening in the sclerotic and choroid, toward the anterior portion of the eye, and as they ~~are~~ proceed the fibres decrease in size, and the spaces between become enlarged more and more, the nearer they approach the anterior extremity of the retina. Anatomists I believe are not decided as to how these fibres end. some say in loops, others in free extremities. It is thin enough to be transparent to the retina.

The internal or vascular layer is composed of a delicate mesh of

arterial and venous [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] nervous layer of the retina, which may be removed from its outer [illegible] by maceration or washing in water. The arteries are derived from branches of the ophthalmic, the arteria centralis retinæ, which pierces the optic nerve immediately after its entrance through the porus opticus into the eye, gives branches which [illegible] in the formation of the [illegible] some [illegible] [illegible] arteries. The [illegible] and posterior portion of the retina is [illegible] which [illegible] has received the name of Vorticose, on which [illegible] [illegible] vessel.

Is it not possible that the yellow bilious stools sometimes occurring in dam office may be owing to the circulation of blood containing bile, through the inner layer of the retina?

The corpus ciliare is a thin vascular membrane connecting the anterior

part of the retina, with the anterior portion of the lens near its periphery. It presents a number of folds upon its surface which are received into the spaces between the plicae of the ciliary processes. These processes radiate from the circumference of the lens, and between the folds is found some of pigment of the ciliary processes. It is nourished by vessels received from the retina. It forms the anterior boundary of the canal of Petit, an irregularly triangular space, bounded by the zonula ciliaris in front, posteriorly by the hyaloid membrane, and the lens at its base.

Its inner face is in contact with the hyaloid membrane until they diverge the former the zonula ciliaris to go in front, the latter behind the lens. The space between being the canal of Petit described above.

The tunicous of the eye are three in number and occupy the whole of

the interior of the globe.

They have been named as follows: the aqueous, vitreous humour (humor vitreus) and the crystalline lens.

The Aqueous Humour.

The aqueous humour fills both the anterior and posterior chamber of the eye. It is a colorless transparent aqueous fluid, slightly albuminous and alkaline. It occupies the space between the concave surface of the cornea and the anterior face of the iris (the anterior chamber) and the posterior surface of the iris & the lens (the posterior chamber) the former being the larger.

The iris hangs free in this fluid and is the septum between the two chambers. This septum in the foetus is completed by the membrana pupillaris, which during foetal life closes the pupil entirely. Its passes are closed (pupil and iris

continuous with that of the iris and the capsule of the lens.

About the seventh or eighth month of utero gestation its vascularity diminishes, from the disappearance of these vessels and in proportion thereto this membrane is absorbed; generally at birth but little, although sometimes the whole is found remaining. The aqueous humour has been supposed to be secreted by a serous membrane known as the membrane of the ~~albuginea~~ aqueous humour, but that has not so far as I can ascertain been fully demonstrated, it is not necessary to describe it.

The Vitreous humour.

This humour fills the principal portion of the cavity of the eye, all that behind the posterior face of the lens. It is colourless, perfectly transparent, and is enclosed in the hyaloid membrane (membrana hyaloidea). This is a

dental depressions, which are seen in our excessively albinous animals, but also sends filaments into it forming the vitreous body. On the anterior surface of this body is a depression for the reception of the posterior convexity of the lens. It is a continuation of this membrane which forms the zonula ciliaris, described previously, for, about a line outside of the depression receiving the crystalline lens, it consists of two layers, which divide, the one proceeding behind the lens, the other the zonula ciliaris, descends nearly to the margin of the lens anteriorly. The space between these two laminæ being the canal godronni or canal of Petit, so called for discovered. The outer and convex surface of this membrane is in apposition and slightly connected with the concavity of the retina, but no lymphatic nerves have been found in this membrane.

Crystalline lens.

This is a solid, colorless—

translucent body, situated between the two other fluids of the eye, and directly in the axis of vision. It is convex on both sides. The posterior convexity, which is received into the concavity in the fore part of the vitreous body, exceeding very much the anterior surface in its degree of convexity. The latter surface approaches very nearly to the iris and assists in bounding the anterior chamber. Its circumference, which is circular, forms the base of the canal of Petit. The substance of the lens is arranged in several concentric laminæ, which in the young are alike, in what in density, the softer portion being exterior, the harder & interior, but when the lens has been macerated in alcohol, nitric acid or boiling water the density of the different layers becomes the same. These laminæ are said to consist of delicate fibres lying side by side and attached together by serrated edges — In the adult no vessels can be traced into the lens or its capsule

2

while they may be found and injected in the foetus.

The lens proper is contained within a transparent membrane, the capsule of the lens, both of which are not alike. The anterior is firm, translucent, fibrous in structure and retains its roundness and brilliancy after immersion in water, alcohol or Nitric acid. The posterior lamina is thin and membranous, firmly attached to the hyaloid membrane and is rendered hard by the action of the agents above mentioned. Its circumference is adherent to the extremities of the ciliary processes.

There are six muscles which act direct on upon the globe of the eye, — four recti, viz. superior, inferior, external and internal, also two oblique, the obliquus superior and inferior. Besides these there are connected with the eye brows and eyelids, three other

viz. Corrugator. Superciliaris, orbicularis and the levator palpebræ. There is also the levator palpebræ. Making in all ten muscles acting upon the eye and its appendages. Eight only muscles which serve to move the eyeball upward, downward, inward and outward. When however they act in pairs "They carry the eyeball in the diagonal of these directions - viz: upwards & inwards, upwards and outwards, downwards & inwards and downwards and outward." When they are all in action, the globe is drawn deeper into the orbital cavity.

"The superior oblique, acting alone" rolls the globe inward & forward, carrying the pupil downward & forward, toward the ~~[illegible]~~ lower [illegible] of the eye. The inferior oblique, acting by itself carries the globe outward & backward, drawing the pupil upward & toward the outer angle of the eye.

When both are contracting

they are the optic and cover the globe of the eye as a ground.

The ball of the eye, its appendages both of motion and defence, and the lachrymal gland are supplied principally from the ophthalmic artery, a branch of the cerebral portion of internal carotid, also from the orbital, a branch of the temporal and from the infra orbital, a branch of internal maxillary artery.

The nerves of motion distributed to the eye are the third, fourth & sixth pairs. Its common sensibility is derived from a branch of the trifacial or fifth pair.

The third pair, or motores oculorum, supplies the superior, inferior & internal recti muscles the levator palpebræ, and the inferior oblique muscles. The ~~ot~~ fourth or trochlearis is distributed to the superior oblique muscle. While the sixth pair or abducentes supplies the external rectus.

I have finished my subject,
and although only conscious of the imperfect manner in which it has been accomplished, yet the task has not been one either devoid of interest, or of profit.

I hesitate not to
offer the course so often given in the name of economics, inasmuch as it was impossible for me to say aught that may not be found in all or any of the works upon anatomy, and I have not sought to take advantage of the labors of others, or even to use their language whenever I found it more perspicuous or concise than

any which I could gain

I leave it in your consideration and I can only ask that it may be kindly dealt with.

Respectfully

[illegible]

The Lymphatics

of the Blood

Submitted in Examination

for

the Degree of Doctor of Medicine

of

the University of Maryland

Feb. 1

Organ of Digestion

by

Samuel Gibson

of

Maryland

Baltimore, Md.

Prelude

of writing a Thesis, we might not be expected to be at a loss for a title, it would not be difficult to find one which would be appropriate, and in that manner that would be a sufficient response of the duties, quite as well more important, therefore it begins to write upon the Book of Creation, unenlightening on the surface, and consequently of useful knowledge in which so many great and able intellects have labored unsuccessfully. To use a homely simile, I will imitate the husbandman and be content with merely turning up the soil rather than the miner in digging deep beneath the surface, in search of the rich and hidden treasures. I will be better perhaps to be critical both Physiological and

Pathologically some [illegible] of disease should [illegible] the important [illegible] in any of these conditions. For as it is called on to restore it to its former condition when diseased, we must first understand its healthy state before he can appreciate its morbid changes. The blood is the great blastema from which all the tissues of the human body are composed. It sends materials to the muscles, building up each particular fibre for the purpose of effecting the locomotion of the body. It sends nutriment to the brain, there developing the powers of the mind. It also supplies all the organs of sense, and through them brings the powers of nature to bear in their secluded retreat in connection

in connection with the beauties and splendors of this world, [illegible] short it traverses the whole system in its laws of charity, giving life and vigor to every [illegible] it touches. Bequeathing strength to the body, love to the heart, and power to the mind. No single tissue is able to exist without its vivifying influence. Blood present, all is life and vigor, but allow it not to permeate the tissues, and immediately the part perishes. We see too plainly the effects of a diminished supply of blood in those poor creatures who are subjects of Marasmus, the whole corporeal substance is reduced to a shadow of its former self; every organ, partaking of it, is a slave of atrophy. The limbs have dwindled from their former real size.

[illegible] and shapeless [illegible] the [illegible] strength and [illegible] of [illegible] his countenance is finished and [illegible] the foundation of his [illegible] being dried up a drought reigns throughout his body, gradually wasting it away from day to day, like a plant upon an arid desert from its accustomed supply of water. His emaciated features give to him a supernatural expression of countenance ~~giving~~ which turns the thoughts of the pitying beholder from things of this world to the world beyond the grave, to which place they know the unfortunate individual is fast hastening. But in the opposite condition, in which every part of the body is supplied with materials from the rich stream of life, [illegible] case

a [illegible] aspect. Thereon is
the former case [illegible] and atrophy and
disease in the cells [illegible] blood
vitality and health. In the former
bloated and hypocritic [illegible]
we have the hale and ruddy face
of youth, of course the cheek of the
delicate female to blush like the
rose of summer, and her merry
laugh ringing through [illegible] and
chasing away all sadness and gloom,
gives ample evidence that she is
enjoying a high degree of health.
Now he who is a victim to disease is
a stranger to this high degree of ani-
mal spirits; he has a cloud of gloom
encircling him which he is unable
to cast off, and through which he
is ~~unable~~ to penetrate. If [illegible] would be
well in the first place to consider into
the formation of the blood. The material

which it is composed; and the moment
its entrance into the circulating
current. The whole world is replete
with materials for its composition
There is no quarter of the globe from
which its constituents are not gath-
-ered. The three kingdoms of nature
animal, vegetable, and mineral each
supply their quota of materials
for its composition. And the va-
-rious substances used as aliments
have by the advance of luxury
been increased to an almost infinite
extent. So much so indeed that in
some parts of the world, a good
cook, is looked on with almost as
much respect as a good barrister
or a skilful physician. But this ap-
-pears to have been as much the case
in former times as at present. For we
are told that a Antony invented

a valuable [illegible] for taking
compounded pudding to suit
the taste of Epicures. After
the eighth year we celebrate a
Knight's Banquet, preparing
a dish for the Lilling of Alma Kings.
The Breadstuffs, the wines, the meats
the tropical fruits are assumed
together into the one great receptacle
the stomach. The fermentation now
being acted upon by the gastric
juices, becomes converted into a homo
geneous compound called chyme
which constitutes the first step to
wards digestion. The chyme leaves
the stomach and proceeding on
its onward course to the duode
num, where after mingling with the
bile and pancreatic juices is taken
up by the lacteals and becomes "Epic
Others proceeds through the thoracic duct

to enter into the circulating fluid. It is rather singular, that such a variety of products differing so widely in their properties, whether brought from the mouth, anus, or other parts of the body, whether from the depths of the sea, or the mountain tops, and as produce when digested the same kind of fluid, more differing in the proportions of gas in its chemical composition; this chyle is then the blood, with the exception of the red globules which become added after its entrance into the circulating vessels. But in what manner they are formed seems yet to be a subject. The blood, while circulating in its vessels is composed of two portions liquor sanguinis, and red globules. The former consisting of fibrine, albumen, serum, and red globules

When fresh blood is taken from the body it separates into two portions serum and crassamentum. The clot consists of fibrine and colouring matter, while the serum is mere water holding the albumen and salts in solution. In the human subject the white corpuscles form a very small portion of the circulating fluid, but in many of the lower orders of animals they are very numerous, while the red globules are entirely absent, thus constituting the class of white blooded animals. Numerous analyses of the blood have been made by the most respected and distinguished chemists; but strange to say they are wide apart as regards the quantity of the elements they themselves remaining the same.

And these substances finally combining are taken to generate heat. Extractive matter, coloured fatty matter, the azotized substance resembles the [illegible] fat, the adipose tissue, while a portion of it is similar to Cholesterine or biliary fat. The salts which enter into its composition are numerous, and play a very important part in the animal economy. Here we find the Chloride of Sodium, and Potassium, the Phosphate of Lime and Magnesia, the Phosphate of Soda, Phosphate and Oxide of Iron. This then being the composition of the blood, each of these elements must perform some office in the maintenance of the body. We find that Albumen enters largely into the formation of the frame, for example, all the albuminous compounds of secretions, the lungs

matter of the epidermic tissues, the
gelatine of the fibrous tissues, and the
haematine of the red globules. It is
also considered the same material from
which the fibrine is constantly being
formed. This last element is the grand
source of fibrous tissue.
There is scarcely any part of the system
that does not require its presence
and when deprived of it they soon
become atrophied and die, like
animals cut off from their supply of
food, for in truth they are literally
starved. The red globules which we
would at the first glance think
superfluous, and inadequate to the
performance of any duty whatever
do nevertheless seem highly useful since they
are thought to be the vehicles of oxygen
to the heart's cavities. And they are thought
to perform an important part in the

function of respiration. The gut
[illegible] of the organs [illegible] in this
capacity as [illegible] [illegible]
[illegible] the food in a crude state
[illegible] the [illegible] substances [illegible] of the
the mineral kingdom, but their presence
there seems to be of very little importance
But when entering into the composition
of the bony parts of the body, the phos-
phorus upon which the whole human
fabric is built, gives to the body firm-
ness and strength, and thus imparts
vastness to the perfection of vital organs.
Without this the whole plan of the hu-
man fabric would be worthless, since
there is no use in the creation which it
could subserve; it being a mere shapeless
immovable mass of matter liable to be
destroyed by the slightest accidents
and as helpless as the mummies in
obtaining the supply of food.

[illegible] fat which is derived from [illegible] food, is principally the [illegible] of the [illegible] alimentary into that substance. When the quantity circulating in the vessels is in excess, it may be converted into fat, or be eliminated from the body by the lungs, the secretory glands, and in the nursing female by the mammary glands, or, in the case of hibernating animals it rots as the winter subsides, or ~~[illegible]~~ the bear after having become loaded with fat during the warmer months of the year, when winter sets in subsists to a great extent on living a particle of food, the fat which has been accumulated, serving to maintain the functions of his body, unless giving [illegible] a very important office in supporting combustion and the

immediately injected into the
veins in a state of the rigid
consistency of the [illegible]
the [illegible] and be rendered
suitable to withstand the depressing
effects of the extreme cold. And for
this purpose the inhabitants of these
countries make use of almost incred
ible quantities of blubber, and
it is said an Esquimaux can eat a
pound of tallow candles for breakfast
and wash it down with a gallon of
train oil, but whether this be true or
not I am unable to say, and I have
no desire to obtain positive evidence
by feasting with them on one of
this repast. But what would be
the effects of this gormandizing
upon the inhabitants of tropical
climates, it would in all probability
prove fatal in a very short time.

explanation is already a
[illegible] and very great in being made
[illegible] the nutritive principle
the body. They therefore are very sub-
stances very nutritious, and subsist
almost entirely upon fruits and vege-
tables which have been bestowed upon
them most bountifully by an all
wise creator. When the blood is taken
from the body, its elements as we have
before mentioned undergo an instant
change, a separation takes place in
the mass and there remains two
distinct portions the serum and
crassamentum. But when the blood
is drawn into a shallow vessel
this change does not take place
and we have a mere homogeneous
mass the serum and clot being
intimately commingled the one with the
other

Of course the chief agent in the process of coagulation is the fibrine, the red globules being merely retained in the mass of fibrine possessing no powers of coagulation. And this can be very readily proved by adding to the blood a salt capable of retarding its coagulation, a Carbonate of Potash or Sulphate of Soda. Then the red globules sink to the bottom, and the clot of yellow (as it has been called) buffy blood forms at the top of the vessel. Some have supposed that the coagulation of the blood was owing to its death, but this can not be the case, since it has been clearly proved that a coagulum may become organized, and a firm and healthy would certainly not be a very good preparation for nutrition. For another mode of this tissue, there are some modes of death

which prevent the coagulation of the blood, such as those producing a strong nervous shock upon the system and extinguishing life at once. It is well known that the blood of those destroyed by lightning is always found fluid in the veins, also those poisoned by prussic acid or destroyed by a violent blow upon the abdomen, the life of both the solids and the fluids seems to be destroyed immediately and coagulation, the last vital act of the blood is prevented, the coagulation of the blood may be retarded by various artificial means, but not entirely prevented by any thing agitating it for a long time in a bottle will have this effect, or totally excluding it from the air, for if we draw blood into a vessel of ice, the blood will sink to the bottom leaving a stratum of ice

upon the lungs, which is completely impervious to air, and we then find that the blood retains its fluidity, and to be as clear as usual. In some conditions of the system the clot contains assumes an unnatural appearance, instead of the natural red hue, it presents upon the surface a yellowish white appearance which has very properly been called the buffy coat. It consists of pure fibrine the red globules having sunk to the bottom of the mass. This has also received the title of inflammatory blood from the belief at one time prevailed that it was never formed where inflammation was not present in the system. But this doctrine has long since exploded and may be numbered among the numerous list of false theories, which have lived for a day and then expired; for it is now known that when the coagulation of the

blood is not that we have the least doubt of it, for we see it in pregnant women, such as spread on a bright air, and so in Chlorotic girls. Mr. Hunter's opinion is, speaking in this manner, that when the blood is in the condition in which the buffy coat is formed, that then the red globules have a greater attraction for each other than usual, thus they become attracted the one towards the other and sink to the bottom of the mass owing to their greater specific gravity, squeezing out the fibrine and serum. But we must not suppose that the blood will always retain the same properties, ~~under~~ for this is not the case, it being one of the most important constituents of the animal frame, is therefore very liable to become altered by disease, even slight variation from the usual consistence may lead to very

serious results. It is a very known fact that slight viscidity of any fluid to apply better to capillary circulation than very perfectly fluid and thin fluids. Thus fluids of viscidity the blood in its normal condition possesses. We could then readily conceive what a slight alteration in this respect would have upon the circulation. When the blood becomes thin and impoverished it is not so perfectly propelled through the capillaries with the same facility but the circulation becomes sluggish and languid, and frequently the blood is transudated through the walls of the containing vessels, and nearly all the hemorrhages are of this kind. Few of them arising from the rupture of an artery as is generally believed. This condition of the blood gives rise to various changes in the sounds produced in

the circulating vessels which can be readily accounted for in this manner, if we take molasses, or any other fluid of like consistence and pour it from one vessel into another no sound of consequence is produced but if we use a liquid fluid as water we have much noise, and so with the blood so long as it remains natural we have the healthy play of the functions, but as soon as it becomes thin and watery then we have unnatural sounds presenting themselves. But the opposite of this condition, of which we have been speaking is seldom less dangerous, that is where the blood has become viscid from the increased perspiration of the solid constituents. We see a very strong illustration of this fact in asiatic cholera, where owing to the excessive watery discharges by the bowels

the blood becomes viscid and is thus
incapacitated for the performance of
its natural functions, the circulation becomes
slow, and if a vein be opened the
blood refuses to flow except dripping
and that almost of a tarry consistence.
Mr Hale of Boston, making some
experiments upon himself ~~upon~~ for
the purpose of testing the cathartic
effects of Croton oil when injected into
the veins, soon after the drug had
entered the vessels he experienced a
feeling of suffocation, he struggled
violently for breath, but soon the
symptoms passed off and he was
again cool &c, after having
~~[illegible]~~ in the cause of science
And I would state this is a much
more merciful way of trying the actions of
medicines than that of experimenting
upon others. But what were Mr Hales

distress, a sensation resembling
a constriction caused by the chest
tightening, the face assumes a livid
color, the blood becomes
diseased from inaction of the
respiratory functions, thus causing
an accumulation of noxious effete matters,
which act as poisons more especially
to the delicate structure of the brain.
Thus when the lungs cease to perform
their office, which is to supply the blood
with oxygen, and to eliminate from it
carbonic acid with which venous blood
is always surcharged. It continues to be
circulated through the arteries and
other veins, and loaded with poisons
it is sent to the brain, where all its
deleterious effects are produced.
This is followed by a sense of weight and
pressure around the chest, the person feels
as if he were suffocating, he continues

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becomes anxious, and the breathing labo-
rious and difficult; the countenance pale,
lips turn livid, and the countenance
is livid and turgid, &c. till the indi-
vidual presents a perfect picture of
misery, and unless aid is very speedily
rendered the delicate tissues of the brain
cease to perform their function, and
life is extinct. Dr Watson relates a
case strongly painting the misery
which these patients endure. A
surgeon was called to see a man la-
boring under Laryngitis, he was
breathing with violent efforts his
neck being bent deeply into his
chest, while his eyes were distended
widely and protruded from their
sockets. The operation of Laryngotomy
was performed on him, immediately
and so great was his exhaustion
from want of rest, that when the

[illegible] and
[illegible] and
[illegible] a little [illegible] more growing
in his face, he fell asleep. The urine
also by its retention in the system, gives
rise to fatal results. This is a disease
called Gravel of the kidney, in which
case with a view to [illegible] urine is secre-
-ted. The poisonous urea being retained
soon accumulates to a large amount
and poisons the patient. We not un-
-frequently meet with disease in old fat
persons. An individual of this kind
finds that he is unable to make water
as, but thinks it a matter of small
moment since his health in other
respects is as good as usual. But
in a few days he complains of head
ache and drowsiness, his skin per-
-haps exhales a urinous odor, and
in a very few [illegible] he sinks into

a state of coma from which nothing can
[illegible] them, Both these
[illegible] poisons, [illegible] are necessary
[illegible] [illegible] into
the stomach [illegible] [illegible] into
the circulating [illegible] [illegible]
vegetable mineral and animal poisons
And that some of them at least produce
their effects by being absorbed into the
blood-vessels, is made [illegible] by their
acting on corresponding parts [illegible]
of both sides of the body. For [illegible]
the poisoning by lead is characterized
by dropping of the wrists, and so of
various other poisons. On [illegible] the
blood seems to be the part first and
most implicated. And as Shakspeare says

"The life of all his blood
Is touched corrupt[illegible]; and his pure [illegible]
[illegible] [illegible] the infection
Will [illegible] through the veins of life."

Dr Lee by the idle comments that it [illegible]
foretell the ending of mortality.

The blood indeed is [illegible] the great
seat of the disease, inasmuch the poison
is situated in the blood, or rather in it
while having remained for some time it pro-
duces its peculiar effects upon the system
and is finally expelled from the body.
This we see in Smallpox and other erup-
tive diseases, the virus being received into
the blood undergoes a process similar to
fermentation. The minute particle first
introduced into the circulation becomes multi-
plied until the whole system becomes
filled with it. Thus the fire which has
been smouldering beneath breaks out
upon the system and the patient is pro-
nounced by a dangerous disease. There is
scarcely any diseased condition which
we meet with in the blood from its origin
either primarily or secondarily. And the
additional medicine which restored the
diseased condition to a correct state of the

of the fluids was not without considerable
standing point. But this is not another
exclusive doctrines was not strictly correct
since the solids may also become di-
-seased; and it would seem strange that
a fact so striking should have escaped
the observation of persons usually so
quick in the perception as were our ancest-
-ors. But should any part of the body
become diseased, the blood circulating
through it, some impure, contaminated
matter is thrust into the tissue. An
abscess is formed around it, it tends
to become gangrenous, the parts around are
reddened & coughing, and from it emanates
a disagreeable odor. If its surface be
disturbed with a probe there imme-
-diately issues out a dark grumous look-
-ing blood, which has become corrupted
and is now unfit to serve the purpose
for which it was intended. And not-

it is poisonous to the patient to himself but has the power of disseminating the disease in a healthy individual where introduced into the circulating fluid. Thus we see the blood which is formed for the support of the body, to sustain it in health and vigor to promote the regular play of all the functions, may become converted into a mass of liquid poison, equally deadly with the bite of a rabid animal or the sting of a poisonous serpent. Truly may it be said we have the seeds of disease within as well as around us.

An Inaugural Dissertation
on the
Signs of Pregnancy
Submitted to the Provost Regents
and the
Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
by

Charles Benjamin Robinson
of
Maryland

In considering the Signs of Pregnancy, with its Symptoms, there is no duty of a Physician, of more importance to him, than the foregoing.

In Consideration of the great responsibility incurred by him, when he is called to examine a case of Supposed Pregnancy, and when his opinion is demanded he Must be thoroughly acquainted with his subject, that his diagnosis May be correct.

The honor of a female as well as her family are oftentimes involved, their peace and happiness destroyed. and the patient May be tempted to Sever the frail bonds which bind her to this earth, to try the awful realities of Another World.

On the other hand, a patient may wish to be considered pregnant; and make false statements, of which the prudent Practicioner should be aware.

It is pretended for different purposes, as for delaying punishment; to extort money; to secure inheritances etc

I will endeavor in a few brief remarks, to explain them, in the order in which they occur.

The Changes occurring in the female, during Pregnancy, are Various and Varied.

The patient often from an amiable disposition, becomes capricious, and quite the Opposite change May occur.

The Color often Varies, in Somes cases becoming Sallow, in others anemic. and in other cases

of a florid hue with occasional eruptions on the face

The patient in some cases gain flesh, and in other cases they fall away.

The first symptom which leads a female to suspect she is pregnant, is the nonrecurrence of the catamenial secretion

If at the second period, there is no secretion by her, it is considered proof positive of her being pregnant.

This symptom is not conclusive, as it has been known to occur after impregnation, and impregnation has taken place and menstruation afterward occurred.

Again conception may take place before menstruation has come, on it may be arrested by

diseases of Various kinds.

The patient often stains her linen with blood to simulate the catamenial secretions

Morning Sickness is the next sign which is seen in Pregnancy, it may come on immediately after conception, but generally not untill about the 6th week, and lasts generally untill the 12th week.

It comes on in the morning as its name implies, but it may sometimes come on in the course of the day

The attack lasts from 5 minutes to a half hour or an hour, After the attack, the patient feels quite well, and is able to get up, and take her accustomed food.

This symptom alone cannot be taken, as it may occur in females who are not pregnant from various causes, combined with other symptoms. With its regularity of occurrence it helps strongly to form a diagnosis.

Mammary Glands the patient about the end of the 2nd month feels a sense of uneasiness in the breast, attended with throbbing pains in the substance of the mamma and nipple, The breasts begin to increase in size, and have a glandular and knotty feel.

The nipple and areola which in virgins is but a shade or two darker than the surrounding skin, now becomes dark especially in first pregnancies

The integument around the nipple is soft and moist and appears as if it was turgid and emphysematous.

The change in colour of the areola and nipple, is only of service in first Pregnancies as the nipple is more or less coloured afterward.

The feelings which the female experiences in her mammæ may occur in young females upon first menstruating such as swelling and hardness with occasional tingling pains

It is said if the poetics in milk dies, while they are preparing, they will gradually subside and disappear.

Of the foregoing signs, not one of them of themselves can be relied on, and when they are taken

together they form still an uncertain diagnosis, and it is not untill the latter half of gestation that any thing like certainty can be arrived at.

Enlargement of the Abdomen is another sign, and comes on gradually during the early Months. and about the 4th Month the Uterus arises from the Cavity of the pelvis and is felt as a round hard and defined tumour, and goes on increasing rapidly untill it occupies the Whole cavity of the Abdomen.

The umbilicus is about the 7th Month on a level With the parietes of the abdomen, and in some cases it is distended.

The enlargment of the abdomen is very uncertain, as it May occur from dropsy; or from flatus. or

distention of the bladder or rectum.

It is distinguished from dropsy by the defined tumour, and on percussion giving a dull sound. In dropsy the tumour is not defined, and if percussion is first made on the surface of the abdomen, when the patient is on her back, and then laid on her side, and percussion made on the surface, well marked resonance will be heard.

Palpation is also serviceable; if by laying the fingers of one hand on the side of the abdomen and gently stricking the surface opposite to which the hand is applied with the fingers of the other hand, if there is fluid in the cavity a wave like motion will be conveyed to the hand, which will not occur in a pregnant female without there is a large

excess of Liquor Amnii

The patient should also be placed in the upright position, and if there is fluid it will gravitate.

Hydramnios may be distinguished by Resistance on Fluctuation.

Quickening this term is applied to the first feelings the female experiences of the movements of the Child.

With the Vulgar the Child is supposed to possess life from this time; but it is well known that that the Child possesses life from the Moment of Conception, and it is just as Criminal to produce Abortion in the first Month, as to bring on Premature Labour in the latter Months.

This Movement is first felt as the head arises from the pelvis; or about the fourth, or fourth and

a half month.

The sensation is sometimes feble but but in other cases felt so sensibly as to cause faintness and even syncope.

The cause of this sensation is said to be that the Uterus when it emerges it comes in contact with the sensitive nerves lining the posterior part of the anterior wall of the Abdomen

Ballottement this is a french term and signifies the act of examining for a foetus.

The patient should be placed against a bed or wall in the upright position, or if in bed in the semi-erect posture, with the knees raised.

The operator with one hand on the Uterine Globe holding it in its position, should introduce the point of the index finger untill it reaches

the Os Uteri.

The Operator should now slid only but gently press his finger up to raise the uterine globe. When if there is a foetus, in a few seconds he will feel something descend again on his finger.

This is considered one of the positive signs of Pregnancy, and can be used most advantageously about the 5th or 6th Months,

This however is no sign either of the life, or death of the Child.

Auscultation has been applied to the Uterine tumour for two purposes first to ascertain wether there is a foetus, and 2nd wether it is still living.

When the examination is to be made, the patient should be in bed with her head raised, and her abdomen covered only with a night drap.

access can be obtained to all parts of the abdomen, by merely turning the patient from one side to the other.

The Auscultator should take an easy posture, so as not to mistake the rustling of his collar or the throbbing of his own arteries, for that of the Child.

The sounds of the foetal heart consist in a rapid succession of short regular pulsations, resembling the sounds of the adult heart, except in force and frequency.

The pulsations of the foetal heart is nearly double that of the adult, or about 130 to 140 in a minute.

It has been compared to the ticking of a watch heard under a pillow.

The extent of surface over which this sound can be heard is very variaes.

The pulsation may be heard after the uterus emerges from the cavity of the pelvis, or about the fourth and a half month.

The patient may be pregnant and the pulsations not heard from the excess of the liquor amnii, or from the feebleness of the foetus.

If the pulsation is not heard, we must not conclude the patient is not pregnant, as the child may be dead, and of course there is no sound.

Another advantage is that it sometimes enables us to distinguish twinpregnancy.

In twinn pregnancy, the abdomen

is larger that usual and is flattened in front and there is oedema of the lower extremities

The pulsation of the foetal heart may be heard in different parts of the abdomen but it is not positive proof of twin pregnancy

Another sign in pregnancy is <u>Kiesteine</u> it is a substance which is found to rise to the surface of the urine of pregnant females.

This substance appears in the urine, after allowing it to stand for 30 or 40 hours. It is of a white flakey appearence and has been likened to the fatty matter which rises to the surface of cold soup. It is supposed to be the caseum, which is secreted by the mamma and which is eliminated through the urine.

If it is allowed to stand for 5 or 6 days, it is broken up and a small portion is dissolved in the urine, while the balance is thrown down as a sediment in the bottom of the vessel.

It may exist in the urine from the first month, up to the end of Pregnancy.

This condition has been known to occur in females who are not pregnant

There is another sign, which consists of a violet colour of the mucous membrane of the Vagina, consisting probaly of a number of varicose veins, caused by pressure above.

The above signs, and symptoms, that have been mentioned are not either of them alone to be considered.

evidences of Pregnancy, but joined together they enable the Physician to make his prognosis which has to be done with the greatest care and utmost precision.

Charles Benjamin Robinson

of

Anne Arundel County

Maryland

An Inaugural Dissertation On the Vis Medicatrix Naturæ

Submitted to the Provost, Regents, and Faculty of Physic of The University of Maryland for examination for The Degree of Doctor of Medicine

By

John Stacey Watts

February

1853.

To

Joseph Roby, M. D.

Lecturer on Anatomy and Physiology

at the

University of Maryland.

The following

Lines

are respectfully Dedicated

By

The Author.

There is perhaps no subject connected with Medicine which gives, little to the Student and practitioner, more distress to his admiration than does the influence of that mysterious principle which we recognize under the designation of Life. In approaching the consideration of this subject, which in all its relations, comprises the entire organic world; the laws by which matter is governed; and the relations and affinities which it has through out its whole extent; one class or Kingdom to another; we have a theme presented to us so grand and exalted in its character, as to excite the mind to a consideration of the source from which should emanate those wonderful and astonishing operations. Who can investigate the material universe by the aids of present improved Science; pathtiming to the utmost depths of the powers of intellect; tracing the beautiful and argements, from the ancient elements to that period, from which the mind itself is resolved into entity

And then exclaim — that all originated in chance.

We perceive the power of a spear of grass, or a blade so sharp, indeed that none can deny it; and yet simple as is the thing within itself the wisest philosophers are unable in their attempts to unravel the subject to its ultimate end. All know and acknowledge that it is developed by the absorption from the earth and atmosphere of the nutrient elements which surround and produce it; yet there is a cause the ultimatum final of which, eludes the keenest searching of human ken. That there is a prime first cause — a motive principle that pervades the universe and rules and governs by fixed and immutable laws all organic and inorganic matter; is a truth which is revealed to us in every operation of nature; and although it has been attempted to be explained by those who desire to maintain the tangibility of other preconceived notions, yet in honor to the belief of an Almighty Creator, the weight of all human testimony to the contrary dwindles into the shades of other days and resolves itself into utter insignificance.

Philosophers observing the similitude which has been found to exist between the mineral, vegetable and animal Kingdoms, have endeavored by tracing each to the confines of the other, to establish a "vast chain of being which from God began,

Natures ethereal, human, angel, Man,
Beast, bird, fish, insect, what no eye can see,
No glass can reach—" the links of which chain constitute of all natural bodies; passing by insensible gradations through the organic and inorganic, and forming a rigid and unbroken series; and in which, it has been conceived,

"each step,
Each shell, each crawling insect holds a rank
Important to the plan of Him who frame
This scale of beings—holds a rank which, lost,
Would break the chain, and leave behind a gap
Which nature's self would rue."

Man therefore, created in the image of his God, has been with propriety ranked as the highest class of organized beings. Distinguished from all others,

by the possession of these superior faculties which at once demonstrates the extended sphere in which he is destined to move and act; they are the possession of reasoning faculties, the powers of speech, and of prehension. By the proper use of these powers man is enabled to comprehend the laws which govern the universe; to investigate the elements of nature, and by ascertaining their first principles and relations to bring them within his control for the subserviency of all his purposes. Originally man did not inherit disease, but by the disobedience of the laws of his creator he became the subject of disease and death; which has been entailed on to all future generations. As a Science Medicine extends upon all others for its subserviency, and if we review the category there are but few if any which will escape the extended scope of her demands. Those however which more nearly belong to the Science are Chemistry, Materia, and Physiology; the latter of which might with propriety be considered as the basis of the Study of practical Medicine.

Consequent upon our inquiry into the nature, causes and effects of disease upon the human subject; and the important part which the system plays in the extension of disease; there are many subjects of diversified interest which present themselves to our notice. None of which presents stronger claims both to the physician and the philanthropist than does the influence of reproduction in establishing diseases of an hereditary character. The exact mode by which this is brought about must, of course, remain forever a matter of speculation; but the fact that, from the union of certain peculiarly constituted persons, there results a being innately possessed of the elements capable of, under certain conditions, being aroused or excited into a disease similar to that which previously exhibited itself in his parents; is so common and so well understood at the present day, as scarcely to excite passing interest into the unknown condition which gives rise to it. Numerous varieties of this element of disease have been described by authors, as affecting different organs and tissues; such as the scrofulous, tubercular, rheumatic, uric and lithic acid,

Cancerous diathesis &c. Numerous have been the theories advanced to explain the manner in which this is effected. The most probable of which is that the plastic material furnished by each parent contains the germ of the disease, which either resides in the tissue, giving rise to the disease by a process of maturation; or holding such sway over the nutritive function of parts, as to develop the disease by a combination of causes of which the blood acts most conspicuously. From that moment at which fecundation takes place, a series of actions are set in motion; the precise nature of which we can only arrive at by approximation. We perceive, for example, that the ovum furnished by the female, and vivified by the seminal secretion of the male possesses, when united, the attributes of living matter: proceeding towards complete development under the controlling power of that vital principle which is sui generis to the species: regulating the relative proportions of the individual; governing the formation, and relations of the various organs one to another, and constituting when complete,

a System perfect within itself, and so decidedly assign ed that each is dependant upon the integrity of the rest for the full performance of its own peculiar duties. This principle continues in full force until the designs of nature have been accomplished in the ultimate death of the individual. And it is the sanitary influence of this same principle, which we so often see exerted in diseased conditions of the System, that has received the name of Vis Medicatrix Natura. "Whatever may be the objections to the views entertained in regarding its manifestation in disease, that such a power does exist can no more be denied than that organised bodies are possessed of the vital principle. We have too many instances of recovery from injuries, not only without the aid of the practitioner, but even in spite of it, to doubt for one moment, that there is, within every living body, a principle, whose operations are manifestly directed to the health and preservation of the frame, and of every part of such frame". Viewing therefore, the human organism as virtually

composed of a series of organs, which bring constitute so many different systems, each performing its own especial functions and offices; forming a chain of actions the links of which are so intimately blended together, that the failure of any to the full performance of its duties necessarily communicates the impression to the rest; calling for an increased action to counterbalance the loss occasioned by the disordered member, thus causing derangement, and ultimately disease. Seeing then that the normal performance of the various functions of the body tends to a healthy state, and vice versa: our next object of inquiry is the means by which this is effected.

Ushered into the world from a state in which it has hitherto been regarded to possess only a vegetative life, the new being, from the stimulus to the peripheral nerves, by its contact with the atmosphere instinctively respires; whereby it is enabled to maintain a separate and independent existence. In this condition, in which all the vital functions are set in active motion, it cannot long exist.

without the due and regular supply of nutritious materials which are required not only to supply the natural waste of tissue, but in this instance a larger abundance to provide the growth of the infant: and here nature has made ample provision, in the lacteal secretion of the mother, of the most nitrogenous compound for that purpose. Food having been taken into the Stomach, it is interesting to notice the changes which it undergoes in its conversion into blood. Receiving during buccal digestion the appropriate secretions of the several glands situated in the region of the mouth, it is then prepared to receive the impression of the gastric juice, or more properly speaking, of the secretions of the gastric glands. In this viscus the food is converted into a pultaceous or homogeneous mass whereby it is permitted to escape through the pyloric orifice into the duodenum or second stomach; here it receives the secretions from the liver and pancreas, and also of the glands situated in this portion of the intestine. By the action of these several fluids, the chyme is

Convolved into a chylous mass fitted for absorption, which commences immediately — it is subjected throughout the whole of the small intestines to the action of the absorbents. Having been taken up by their afferent vessels, it is transmitted through the mesenteric glands, in which it most probably undergoes a change; it is then conveyed by the efferent lacteals to the receptaculum chyli, or commencement of the thoracic duct through which it passes to be emptied into the venous mass at the junction of the left internal jugular and subclavian veins. Passing through the vena innominata and descending vena cava it reaches the right auricle which, by contracting upon its self, forces the blood into the right ventricle, which performing the same involution throws the blood through the pulmonary artery into the tissue of the lungs: passing through the capillary circulation there it undergoes during respiration the process of oxygenation or of decarbonization, by which the carbonaceous elements, or effete matter collected during the course of its circulation through the system, is given off in the form of carbonic acid, while at the same time oxygen is absorbed converting venous into arterial blood;

Then circulate it passes through the pulmonary veins to the left auricle which contracting forces it into the left ventricle, which also exciting by its presence contracts upon it forcing it through the whole entire system to perform the different processes of nutrition, Decarbonization, and Secretion.

Observing that all of the vital functions are carried on through the agency of the blood; and that the blood is formed from the food ingested with the action of the atmosphere, we can readily conceive how a function so essentially necessary to health, should become of multiform importance in disease conditions. In all well constituted persons there is a certain standard of health, which condition necessarily implies a normal condition of all the parts, correctly performing all their offices: any deviation from this point whether it be of an adynamic or sthenic character will produce disease. Taking this view of the system we would expect that disease would progress in an inverse ratio as the force of the disease to the power of that system. Since we are so entirely ignorant of the essential nature of disease: we are compelled to learn them by their symptoms and effects, diagnosing by a comparison of one with another.

Then as disease may be defined to be any deviation from a State of health, it must follow as matter of course that in order to bring about that state of health, we must restore the just equilibrium of the System. All that medical aid can accomplish is to remove the cause, and aid the powers of nature. Regarding disease as a material principle, when once engrafted into the system we have but few outlets by which it is eliminated — the lungs, the liver, the kidney, the alimentary canal, and the skin. The salutary action which these different emunctories not unfrequently exhibit to us in diseased conditions, under the title of critical evacuations, frequently points out the effort of nature to relieve herself, thereby giving us the leading indication to be pursued in that particular case; and although as a general rule artificial attempts to anticipate, or substitute the same operation almost always proves inefficacious, yet it is cautioned that much hint has been thrown upon the therapeutic agencies which have been employed in the treatment of certain organic diseases. The well known sympathy which has been found

To avoid blamed a diseased organ, and a contiguous one in health; the same thing which often happens from the affections of joints situated in different cavities, is familiar to every one who has closely observed the progress of certain diseases. In diseases of the central organs, especially in those intending cases of patients, with them, the very intimate association of the stomach and bowels is so great as not infrequently lead to the error that the irritation of the latter organs is the parts diseased and not of the former. This mistake I have known to occur to experienced and careful practitioners.

The double interchange of sympathies which takes place between the organs of the thorax and abdomen with each other and with the skin, is another instance of the dependance of the different parts of the system upon one another, through the agencies of the nervous and vascular system and is one which cannot be disregarded in the management of those diseases. Very much has been written and said in these latter days upon the improvements which are being made in the science of medicine, and the fact is apparent to any one who will compare

the present state of this noble science with what it was a few centuries ago: the improvement is indeed astonishing. But there is one fact not to be forgotten, that all the valuable discoveries and improvements have their foundation in the laws which govern the animal economy. To analytical chemistry and pathological anatomy these improvements are especially indebted: and probably in no diseases have we their changes more clearly illustrated than in anemia and albuminuria, or Bright's disease. Here we have an increased amount of fibrin with a very great diminution of the blood globules, showing the great tendency of these diseases to result in acute or subacute inflamation of some of the internal organs. The vast improvement in the treatment of that very extensive class of disease known as Stroma within the last few years, is remarkably confirmatory of the existence of a fixed standard of health in the system; which is illustrated upon the very same principles that we understand there to be a secreting point in the liver only in an inverse manner. For if we have an

inflammation in that organ; of an acute character the power is already in ordinary affections, which is nervous, is wanting, for the very reason that the excitement is already of such a character that secretion is arrested. But the effect is reversed in Strumous disorders. For there the universal tendency is to degeneration, and this no doubt is the reason why we have those diseases making their appearance at or after the period of puberty. The object in those cases as the treatment at present would indicate, is to preserve the state of the system and especially the blood in as highly an assimilated condition as possible in order to prevent the deposition of that unassimilable product which we always find in that class of diseases.

When we take a retrospective view of medicine; viewing it in all its phases; observing the various pathological doctrines, which at various times have risen to culminate and hold for a time the meridian point in the firmament of the science, and again with all that name preceded, to sink into Oblivion: we are sufficiently admonished of the

obscurity with which it is cloaked. Among the vast number who have labored to advance the cause it is suffi-cient to indicate that of Hippocrates the justly reputed father of Medicine. He it was, (whose name will live as long as history, venerated by all succeeding generations,) more than two thousand years since laid the true foundation of Medicine. He advanced the opinion, that there is a principle, or power in the system, which he called Nature, tending to the preservation of health, and the removal of disease. Acting upon this doctrine; when we recount the innumerable obstacles which occur first, as to our entire ignorance of what disease is, and in the next place, not only the uncertainty, but dangerous results which frequently follow the administration of drugs; we are led to appreciate the immense value of hygienic means, and especially in diseases of a chronic character. Finding it to be of the very first importance to give the patient the advantage of pure air, nutritious diet, with attention to cleanliness, the removal of all exciting causes, and the restoration of all the secretions and excretions etc. Then can we congratulate ourselves, that we are acting as the instrument and handmaid of Nature, whose powers alone, when properly guided, are capable of the expulsion of disease.

Approaching the couch of disease the physician, with his mind richly stored in knowledge, which he has accumulated from the researches of all his predecessors who have enriched the science by their experience, intuitively discovers his patient. His first object is to learn the nature of the malady, his next inquiry is directed to the constitution and habits of his charge. If the disease be one of an acute kind requiring his immediate intelligence, and active medication all else things he summarily adjusts his treatment to suit the immediate indications of that particular case. No systematic treatment of any disease, or even of any single class of diseases can be instituted to apply to each and every disease, which happens to fall within the prescribed range of this or that disease as we find marked by certain standard authors. What then under these circumstances shall be our guide, and how shall we be guided in our practice. Could we appreciate the elements of disease, as well as the elementary structure and functions of the body we would be as simple as easy; or could we view the human system as a mere machine whose operations we could command and direct, then would we be able to lay down fixed principles to govern us, which would be applicable to each and every

case which might present itself to our notice, according to the particular organs, and structure involved. So different in [illegible] from this [illegible] so vascillating do we observe the practice of medicine to have been in all times, that we can better appreciate the true principles of practice by inoculation. No single disease affords us a better example as a type than typhoid fever: a disease which we might say, as of all others, is manifested by the efforts of nature to rid itself of some offending cause of irritation. Making its approach insidiously, the patient at first complaining of but slight indisposition, which goes on increasing pari passu with each succeeding day until it has reached its acme, which is generally from the 8th to the 12th days. Upon seeing it early, in its incipiency, what in the present state of our knowledge would be our mode of treatment. If the pulse be strong, full and frequent we might be inclined to abstract blood by venesection, and subsequently, if required in the course of the disease, locally. But in abstracting blood at all, it is always premised with caution, and its use is always restricted to the first few days of the attack, and why? because, knowing the universal tendency to prostration, and which is most frequently the cause of death,

the practitioner is desirous to compromise the powers of the system as much as possible, and therefore he wishes to obtain its full remedial powers at once, and wishing to subject his patient in the course of this disease to a sudden and total change of that vital force, through the remedial agency of stimulants expects his patient to pass from the effects of disease. Being constituted of a mixture of the nervous and vascular elements, we expect following the stage of excitement, that of depression of the nervous system. In this stage the treatment is entirely reversed, for instead of the depletory plan, we at once resort to the use of tonics and stimulants. Disregarding in a manner the presence of disease the practitioner has now but one object in view; to build up the powers of life by every means in his power. Food of the blandest and most unirritating kind is allowed in the smallest bulk and of the most nutritious articles. Cautions not to over stimulate and excite the enfeebled state of the stomach and alimentary canal until it has sufficiently regained its original healthy tone. Here we have a familiar illustration of the limited range of medical skill in relieving the afflicted, teaching us that are we for observations are guided by nature's efforts - "natura morborum medicatrix".

An Inaugural Dissertation

On Scorbutus

Submitted for Examination

To the

Board of Trustees and Faculty of Physic

Of the

University of Maryland

For the

Degree of Doctor of Medicine

By

E. Neff Hinds

of Maryland

Baltimore . . . June 1855

Prodesse quam Conspici

Beaufort was asked but to raise his hand
before he died but "he died and made no sign"

If we estimate the value of a thorough knowledge, and accurate acquaintance with the diversified cases to which accoucheurs are exposed, and the various casualties to which they may be subjected, by the formidableness of their number, and respective characters, and the varying grades of peril which each may assume, there is none more entitled to our regard, or should win more of our attention, than that denominated Eclampsia, or puerperal convulsions.

'Tis true this is comparatively, and happily a rare disease, yet dominating its unwelcome presence where most hidden: Yet when it does appear, 'tis but too often the pitiless minister of death, and its time—the gloom of the tomb—the fatalities, with which it courts beauty and loveliness, are the most infernal, and the eminent with which it would invest the home that was—radiant glowed with passions infinitude as a—rainbow, are the vestments of the Charnel house. Its victims it loves to cull from the choicest flowers of all the field, from those whose blushing petals announce their not yet halcyon splendours

and around which halos of loveliness and beauty are still fanning, like unknown enveloping in nothing Sun. Hence, like an inexorable destiny, it severs the thread of life for those to whom the benignant Sisters Clotho and Lachesis would grant the longest span. Truly there is something so affecting in the death of a young mother, who perhaps had just triumphed over the curse of Heaven - "In sorrow shalt thou bring forth children" something so touching in the spectacle of withered hopes, and promises that proved but the vows of deceit, that it plants pity in the heart of Inhumanity, and scores, that outshine the purest piety, will not dispute that tis a dispensation for an accouchee to die.

By the term Eclampsia (Gr. ἐκλαμπεῖν to flash or glitter) is designated an affection, characterised by a series of convulsions, in which the muscles of relation, and often also those of organic life are involved, and the convulsions are either accompanied, or succeeded by entire or partial suspension of the sensorial and intellectual faculties.

Tis, as above mentioned a malady which

the accoucheur, however extensive his practice, is seldom called to treat, but when once met, the image which it impresses upon his mind so malignant in expression, so cruel in its menaces, is as durable as his memory, and "from that hour his dreaded as the queen of an infinite foe." The rate of the frequency of its occurrence has varied much with the experience of different authors. Thus according to the statement of Madame La Chapelle, there was one case in about two hundred accouchements. The records of Madame Boivin, at Maternité in Paris, give one to a thousand, and Ca Veaux met with only three cases in upwards of two thousand accouchements. The disparity is thus so very great according to statistics. The results afforded by these statistics are not however to be received as a just estimate, or correct exponent of the peril from this source incurred by accouchers. This arrow which casts its shadow before it, as the herald of its advent, which to the many practitioner, whose minds eye ever has in view the hackneyed but honoured motto "occurrite veneno antehosti," is sufficient for the adoption of those measures, which shall either avert its approach, or under

its attacks tractable. She prepares himself for any exigency, resolved nulla difficultate vincci.

Primiparae are more exposed to its attacks than multiparae, tho the latter are by no means exempt from its attacks. Indeed if a woman has once been under its bane, she will, unless further prophylactic measures be premised, be very prone to its attacks at every succeeding accouchement, and should at those periods therefore be most sedulously guarded, and every symptom of its recurrence be actively combatted.

The alleged predisposing causes of this affection are very numerous, and many of those enumerated are very vague, we shall consequently go into no detail, but merely mention the most obvious, and then pass to the symptoms.

Among the most frequent of its causes may be mentioned either a lymphatic, or a sanguineous temperament, predisposing to serous infiltration of the cellular tissues, the obstruction presented by the gravid womb to the circulation, and indicated by the dense a

of the inferior extremities, tumid features and hands. The latter, the sanguineous temperament predisposing to cerebral congestions. A loaded condition of the primæ viæ has also been strongly insisted on by some, as predisposing to this affection, a suspicion of its presence may be entertained, when the patient complains of pain in the epigastrium; and the tongue will also witness its presence. When the above causes are present in force sufficient to produce a complete, their effects will be primarily & chiefly by the development of certain pathologic symptems, consisting of various nervous phenomena, such as dizziness or even perversion of vision, vertigo, tinnitus aurium, muscæ volitantes, & retina & vertigo, for the most important symptom, and one which is regarded as almost infallible in its inquiries concerning this disease, is a peculiar species of Cephalalgia, and so tightly pathognomic is this symptom considered by some, that a certain eminent Accoucheur, and author (Dr. Meigs) says

that it should, whenever found in an accouchement, be regarded as the sure precursor of eclampsia, and declared that in every case, when this symptom presented, and was disregarded by him, he made his neglect of its warnings.

This Cephalalgia is characterised by phenomena strictly sui generis, and these serve to distinguish it from that arising from other causes, and at other times, and generally baffles all medical measures. It is always circumscribed, sometimes occupying but half the cranium, at other times seated in one coronal protuberance, or some other equally circumscribed space. It is exceedingly acute, and described as inflicting the most excruciating agony, accompanied at the same time, frequently, with nausea or even vomiting, and sometimes violent pain in the epigastrium.

If these symptoms are not actively combatted, and quelled in their formative stage, they rapidly increase in intensity, and others more alarming, and portentous appear. Gradually the sensorial, and intellectual faculties are more and more deeply involved. The pulse, if the accouchee be plethoric, is slow, full, and hard

and the face alternates with the glow of animation and the pallor of death. If the individual, on the contrary, be immune, the pulse will be small, hard and contracted; the skin cold, and pale and sometimes affected with horripilation, chillness or formication. The attack is thus ushered in with all its malignity. The features now become hideously distorted; the muscles quiver, and vibrate like low-strings. The tongue, protruding, is sometimes excessively lacerated by the teeth, during the spasmodic closure of the jaws, the blood from it being scattered in every direction, enhancing the horror of the scene. The hands are usually clenched, and the whole muscular system is controlled by the convulsions. The respiration now becomes hissing, and interrupted; indeed it is frequently reduced to a succession of sighs, owing to the rapid convulsive movements of the diaphragm, and the spasm of the glottis. The blood is thrust upon the brain, and the whole system saturated with Carbonic acid. Asphyxia with its livid countenance, purple tongue, and blue, cold extremities presents

itself. The brain no longer receiving sufficient nervosity or nerve force, is stupified into temporary oblivion: whilst the medulla oblongata, the terrible vital, which presides over the function of respiration, continues to eliminate nervosity adequate to create the contortions and agonies witnessed in these convulsions.

At this crisis, for her the veil must turn, the unfortunate individual seems suspended by fragile strands over the grave. Her face is sepulchral, each lineament is fixed, the eyeballs, with their dilated pupils and unclosed lids rest in the convulsions, despair portrays itself in every feature, and death, like the vulture, seems just about to close his wings over his victim.

Even now there is life, and hope,—

"While the sweet bird, while that the air can fill,
Let earth be ice, the soul has summer still"

Indeed the imperfect oxygenation of the blood, which would at first, seem the precursor of a fatal issue, is but an illustration of the many instances, in which what seems to us an affliction is, in reality, a Providential MERCY. For after the whole

~~[illegible]~~ system has become carbonated, the muscles, thus being deprived of innervation from the brain and spinal marrow, relax their rigidity, thus restoring to the lungs their oxygenating powers, whilst the brain returns to the discharge of its functions, tho' frequently some of its faculties are suspended for a longer or shorter time, if not entirely abolished.

"The number of convulsions is variable, as is likewise their duration, which increases with each succeeding convulsion, tho' it rarely exceeds six or eight minutes. Each succeeding comatose interval is also more profound, and intense than the preceding till finally the lucid moments of intelligence no longer exist, and profound stupor, with stertorous breathing, is substituted in their stead, the consequences of the intense cerebral congestion.

During the convulsions the uterus, if the eclampsia occur at term, frequently remains quiescent, as if paralysed by the universal commotion. But more frequently it is an actor in the great drama, and contracts intently, the

the accoucheur is seldom conscious of the contractions. The character of the contractions is generally normal, and the convulsions occur simultaneously with them.

The diagnosis can never be difficult to discern, if the accoucheur studies well the history of the case. There are only one or two affections with which it could be confounded, by any venial error, and those are Epilepsy, and apoplexy. To the former it is allied by no feature, save that an Epileptic fit may be followed by a comatose stage; and it resembles the latter only during the comatose stage, which may be distinguished from apoplexy by the fact, that it was preceded by convulsive phenomena.

The Prognosis of eclampsia, will, under any circumstances, be very grave indeed; tho' it may be somewhat modified by the stage ~~of the stage~~ of the pregnancy, and also by the cause which created it. Thus primiparae are less secure from danger than multiparae, if the eclampsia occur during gestation: if on since dilatation of the womb is one of the

most auspicious conditions for its relief, and these cases therefore bring more difficult of dilatation from their hardness and length; it necessarily follows that the risk must be proportionally greater.

According to Madame La Chapelle, the most favourable prognosis is derived from that condition of system denominated serous plethora, chiefly from the fact, that in these individuals, active depletion cannot be carried to the same extent. But if immediate danger is more to be apprehended in lymphatic temperament, certainly the remote consequences or sequelae, such as rachitis, tumour, fundysis and the like, are more frequently the heritage of the sanguineous temperament. It is no unusual occurrence for a patient to recover from the convulsions, and afterwards be carried off by abdominal inflammations.

"It is said that those eclampsias, which occur after delivery, are the most favourable, as the worst is then thought, and it is reasonable

to assent to this opinion; tho according to Randolph am
tis under these circumstances even more serious.
"Fortunately puerperal convulsions are rare in
pregnancies younger than the sixth month, tho'
one case is on record, as early as the sixth week,
which could be cured only by extraction of the
ovum. Cases parallel the prognosis is the more sus=
=picious in proportion to the advancement of
the pregnancy and more favourable in mul=
=tiparae than primiparae.
"The prognosis concerning the foetal life is
always most unfavourable. Statistics prove
that two thirds perish, and that those which
survive the throes of parturition, live but a
very short time, and generally die in convul=
=sions, which they inherit from their mothers.
'Tis an affection upon which pathological
Anatomy has shed no light. 'tis true there
is sometimes a little effusion around in the
ventricles of the brain, and perhaps conges=
=tion of the encephalic vessels; But these
sustain the relation of EFFECT, and not cos

cause.

We shall now proceed to the treatment of Eclampsia, which is perhaps the most important consideration, since life is here the price of its cure.

The treatment of puerperal convulsions resolves itself into the prophylactic and curative.

The former consists in the adoption of those measures which reason, and experience point to as the best adapted to that purpose, and are indicated when every those causes, whose influences by their intrinsic modification, predispose to convulsions, are present.

The latter relates to those measures adequate to its abolition, when present.

Eclampsia may, almost universally, be averted by proper means, since its approach is always heralded by some one, or several of its many premonitory symptoms. Thus albuminuria, edema of the lower extremities, with bloated features, and cephalalgia, occurring towards the termination of pregnancy, would indicate the propriety, if desirable

tion by some mode, either gradually, by restricting the diet, and the exhibition of mild and gentle laxatives, or directly, by venesection, according to the urgency of the case.

Much mischief is learned in these cases by interrogating the patient concerning her previous history, particularly should this be done, if the patient had borne children, whether or not, during the previous confinements symptoms of convulsions or convulsions themselves were present? her answers may prove valuable information to the accoucheur.

In all cases where the accoucheur complains of cephalal sometimes may (generally occurring simultaneously with the uterine pains, Eclampsia may be suspected shortly to develop itself, and that event should be immediately dreaded is now the almost unanimous opinion of the nightsiers, in cases where the convulsions have been preceded by profuse uterine hemorrhage, more caution is requisite in the abstraction of blood.

and veins of the arms, or cups should be applied about the neck or mastoid process, and these should be continued in all cases where the coma and stertor is uninterrupted and profound, without the intervention of any lucid moments. If the patient be of a sanguineous plethoric habit, and the convulsions malignant, the stream should be allowed to flow until the Ligamen Animi, or until the convulsive phenomena have entirely disappeared. Dr. Meigs, whose extensive experience warrants his opinion in his work, declares that in every accouchement, where symptoms of eclampsia were present, and he abstained from the use of the lancet, he never failed to rue his neglect, perhaps by the loss of the patient.

At the same time in conjunction with venesection, we should endeavor to obtain a derivative effect by the administration of gentle purgatives. If these cases of medicines the exhibi-

tion of mercury is more obnoxious, in this case, than Calomel, in doses of gr. j every two hours till ptyalism is produced, or an equal quantity in form of Pill Hydrarg. gr. vi. ut, by thus employing it in this stage, lay the foundations for its beneficial effects, if subsequent inflammation should be developed. If depletion has been carried to a sufficient extent, it may continue with the Calomel a similar quantity of Ant. Potassio tart. and Opium, or what is still better Ext. Hyoscyami, since it possesses the virtues of Opium, with the additional one of being neither an excitant, or astringent.

Should the patient be unable to swallow, as sometimes occurs, the Calomel may be incorporated with lard and then placed between the lips, and alveolar arches, by which means, it will be either absorbed or swallowed.

Emmetics may also be resorted to, such as tartar pil, and laudanum, or what is equally good, because a

domestic one, may be formed by adding one tea-spoonful of chloride of Sodium to a pint of water. Sinapisms to the lower extremities, and large dry cups are specially indicated. If sinapisms none, perhaps is superior to, fine mustard moistened with tepid water. Care however is requisite, that they be not allowed to remain on too long, and thus light up considerable inflammation, or cause sloughing. The surfaces to which the cups have been applied should also receive surveillance for the reasons mentioned above. Another simple, but very important measure, for the comfort of the patient, is to place a piece of cork, Gutta percha or some soft material between the teeth to prevent laceration during the convulsions.

The exhibition of other special measures will be indicated according to the stage of gestation, at which the convulsions appear and must consequently be left to the practitioner.

our judgment and discrimination which is often
determinably and when we use them. For instance,
convulsions may occur during the seventh or eighth
month of a pregnancy and may have resisted
all the above measures, shall we then provoke
a delivery, knowing that depletion of the blood
is often the great remedy?
If convulsions occur during a labor which
is progressing well, with cervix dilated, the ac-
-coucheur should not intermeddle. But
if the convulsions are violent, menacing life,
the cervix undilated, and the head at the
pelvic outlet above the superior strait, we should
then either have recourse to pelvic version,
or the forceps and the delivery should
be as rapid as possible. Hyd. Bella donna
may be efficient to the cervix to dilate
it to a small extent when thus administered.
The chief resort is to force the premature
birth by the hand or by incisions in
the neck, but this, justifiable only in
the most desperate cases, we should

not be undertaken but upon most religious considerations.

Chloroform has also been used with advantage in these convulsions.

Finis.

December 17th 1852

E. M. Tingly
Md

An Inaugural Dissertation

On Cholera Morbus

Submitted to the Examination
Of the
Provost, Regents, & Faculty of Physic
of the
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Session 1852 & 3

For the Degree of M. D.

by
Alphonse. Augustus. White.
Of
Maryland.

Cholera Morbus.

The name of cholera is given to an affection in which the prominent characters are diarrhœa and repeated vomiting and purging, with painful spasm of the stomach and bowels, and occasional cramps of the spinal muscles.

Three varieties of the disease have been observed, so different in the circumstances of their occurrence, as well as in their symptoms, progress, and results, as to merit distinct consideration. These are Cholera Morbus, Epidemic Cholera and Cholera Infantum. The present article is devoted especially to the first of these affections. It is the variety so common as an endemic disease in various parts of the United States during the Summer season.

By recent European writers it is distinguished from the epidemic variety by the name of Common or Sporadic Cholera.

Symptoms

It is generally characterised by the vomiting and purging of bilious matter. It often comes on suddenly, especially when the immediate result of some irritant substance on the stomach and bowels. but not unfrequently it is preceded for some days by a sense of weight or other uneasiness in the stomach, colicky pains, headache, and sometimes by a furred tongue, chillness and slight febrile epitement.

The vomiting and purging is often preceded by a good deal of nausea, and attended by spasmodic pains in the stomach, which is sometimes excruciating, but is relieved after each discharge. In the interval between the paroxysms of vomiting, the patient though comparatively easy, often experiences distressing nausea, or a burning sensation in the epigastrium and complaints of exhaustion.

The discharges usually consist of the ordinary contents of the stomach and bowels at first: the matter vomited, being either food recently taken, or colourless and often sour or acrid liquid; and the stools fecal. These are soon followed by bilious matter of a green or yellow colour, intensely bitter and more or less acrid. The pulse is usually feeble the countenance pale and shrunk, the skin cool and damp, the urine scanty or suppressed. and in severe cases the patient is affected with severe cramps of the extremities.

Respiration hurried, heartburn, thirst, & a small pulse. In favourable cases, the more violent symptoms subside in a few hours, or readily give way to treatment, sometimes the complaint assumes a violent character, the vomiting, and purging are almost incessant. the discharges being often brown or blackish, acid or even bloody.

The suffering from vomiting, retching and spasmodic pain, both internally and externally are intense, there is extreme thirst, pulse is small feble frequent and irregular, the respiration short and frequent, the extremities cold, skin bathed in cold sweats hiccough, and abdominal distension comes on, with a cessation of the vomiting and the patient sinks into complete exhaustion, death may occur within twenty four hours, but more frequently the disease continues for three or four days.

In some instances moderate febrile symptoms attend the disease, instead of being blood the evacuations in some rare instances are colourless or whitish, in such cases the attendant symptoms are of a severer character. The disease generally subsides under remedies without leaving unpleasant consequences, only a moderate debility remaining. Even when the patient speedily recovers, by the use of a suitable regimen sometimes it required

medical interference, occasionally the patient is left with a [illegible] with other symptoms of continual irritation of the bowels. In persons of a good constitution the disease is very rarely fatal, it is most apt to prove so in the very old the feeble and intemperate.

Causes.— Hot weather long continued, strongly predisposes the system to this disease, and may of itself cause it [illegible], it often proves to be breaking out of Miasmatic Fevers, as if resulting from the operation of the same cause. It in a lesser degree, most commonly the attack is brought on by some sporadic cause capable of acting directly through the nervous system of irritating the stomach and bowels. Among such causes are exposure to cold when the body is warm and perspiring, the use of indigestible & irritating articles of food, too and improperly prepared, [illegible] liquors, [illegible] of the [illegible] character of the food, the use of very cold drinks, strong mental emotions —

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as fear or anger, and various movements which produce sickness of the stomach, The disease prevails especially in hot Countries, and during the hot seasons in temperate climates, sometimes it is so prevalent as to appear Epidemic, in this Country it is most common in the Months of July & August. It chiefly attacks adults.

Nature.— This must be inferred from the symptoms and causes, sometimes redness & other evidences of inflammation is discovered in the stomach or some portion of the bowels, but often no such phenomena is presented, and neither the alimentary mucous membrane, nor any other structure exhibits appearances which could explain the result. The probability is the disease consists of congestion of the liver system, produced by the combined action of a high temperature or Miasma or both, and inducing an irritation with in the liver and mucous membrane of the stomach & bowels, which shows itself in an increased and altered secretion.

The painful gastric & intestinal symptoms are due to the general state of the mucous congestion in the chronic case, & to the irritability of the mucous lining and nervous secretions or both, that these liquids is the source of much of the pain & spasm, is evident from the temporary relief which follows their discharge. The prostration is owing partly to the discharge, and partly to the debilitating causes. The chronic form instead of being an evidence of inflammation of the stomach, is the mere expression of the wants of the blood vessels reference of their more fluid contents.

In a large proportion the spasm of the sphincters are probably the consequences of the gastric & intestinal irritation, acting through the nervous centers.

Diagnosis.— Vomiting and purging with more or less bile in the evacuations, are not unfrequent attendants upon other diseases, as Bilious Fevers, Gastric Cholera, and Inflamation of the liver. from the first of these however

Cholera Infantum may be distinguished from it by the absence of a hot skin, a strong pulse, headache and by its much shorter duration, from the two latter by the same absence of febrile symptoms and a less degree of tenderness. There may be great difficulty in distinguishing it from the effects of certain [illegible] substances, the vomiting generally precedes the purging by a considerable interval, the discharges are seldom so highly bilious and the poison may often be detected in the evacuations. The circumstances attending the origin of the complaint and the season of the year, may be taken into consideration in forming a diagnosis.

Bilious Diarrhœa is sometimes attended with moderate vomiting, but this may be considered only as an inferior grade of Cholera.

Treatment.

It is founded on the indications of relieving the vomiting and by allaying pain of the stomach.

Ways of effecting the first indication by the moderate use of opium and indirectly by powerful revulsion towards the surface, and

Ways of changing the vitiated action of the liver by the alterative influence of Calomel.

Mild diluent drinks are to be administered freely, so as to wash out the stomach, a sinapism to be applied over the epigastrium, and a pill containing ½ gr of calomel, and from the ¼ to ½ gr of opium to be administered every half hour or every hour according to the urgency of the symptoms.

The drinks should consist of chicken tea, made by boiling for a

short time a portion of chicken [illegible] a large quantity of water, so as [illegible] impart a slight taste to the [illegible] of mucilaginous or [illegible] fluids, such as Gum Arabic water, mucilage of Sassafras, or flaxseed tea, toast water, barley water, of mild herbaceous infusions, as mint-tea, balm tea, or of luke warm water, They should be given freely at first so as to assist in the evacuation of the acrid bile, and then administered moderately merely to relieve the thirst of the patient.

For this purpose as well as to quiet irritation of the stomach, Carbonic acid water, in small draughts of about two fluidounces frequently repeated answers admirable well, The Mustard cataplasm should be left on for a half an hour, or longer

until it reddens the skin intensely, or becomes no longer tolerated. In severe cases, if in the advanced stage it is necessary [illegible] Opium more freely than in the commencement of the disease, from II to III grs of Opium in pill, or an equivalent quantity of Laudanum, may be [illegible] and repeated at longer or shorter intervals, until the violence of the disease abates, If a complete and sudden suspension of the secretion is not desirable, there is danger if the congestion is not allowed to relieve itself that inflammation and fever may ensue. Hence one of the advantages of combining Calomel with the Opium, if the disease should resist these measures, recourse may be had to a blister over the epigastrium [illegible] Morphia may be sprinkled over the blistered surface.

[illegible] of Laudanum
with [illegible] may also be given;
in cases of great [illegible] stimulants
may be applied [illegible] and blisters
to the [illegible] of the arms and legs.
Tincture of Camphor, aromatic Spirits
of Ammonia, Ether, and [illegible]
Ether may be given internally in
conjunction with Opium.

Should Fever follow
the suspension of the disease, it should
be treated by keeping the bowels
open by small doses of some mild
cathartic, as the Seidlitz powder, Castor
Oil, or a solution of Carbonate of Magn.
in Carbonic acid Water, and the effervescent draught, and cooling drinks
should be administered at short intervals.

Symptoms of Gastric
inflammation may be counteracted
by leeches to the Epigastrium, - followed

by warm fomentations, or emollient cataplasms.

Intestinal irritation may be treated by emollient [illegible] and mild laxatives as castor oil, or [illegible] or little [illegible].

During convalescence the greatest care should be taken in relation to diet, which should consist of [illegible] or a easily digested animal food, such as farinaceous substances, milk, cream, broths without fat, and the lighter forms of solid animal food.

Various other modes of treating cholera morbus have been recommended, some considering it to be essentially Gastritis, or Gastro Enteritis, have relied chiefly upon bleeding, leeching and demulcents.

Specacuanha in smaller doses has had its advocates. Hope's mixture consisting

of a bottle of distilled wine, forty drops of Tincture and eight fluidounces of Camphor water, and taken in doses of half fluidounce every three or four hours have been recommended.

A clinical report of a case
submitted to the examination
of the Provost, Regents &
Faculty of Physic
of the University of Maryland
for the degree of
Doctor of Medicine

by

Charles O'Donovan
of Maryland

Gentlemen of the Faculty:

In accordance with the requirements of your honorable body, the subjoined report has been written; & although the descriptions of the cases may not be very minute, yet, having been noted at the bed-side of the patient, I can vouch for their accuracy.

To me it appears appropriate that a Student who has resided a year in an hospital, & consequently, has had many opportunities for observation, should render a clinical report of what he has seen, rather than theorize upon some isolated subject.

For this reason principally, I prefer noting the symptoms, course & terminations of disease & watching its treatment by those whose experience & ability guarantee that every thing that human sagacity, or forethought could devise & suggest

would be brought to the aid of nature, in her efforts to throw off the yoke of disease.

Thinking that any attempt at originality would in a student appear pedantic, I shall endeavor to explain the phenomena of disease as I have been taught, let them, leaving to others of more inventive or speculative minds, the difficult task of adding any thing new to how diseases, for the elucidation of whose symptoms & causes, & the perfection of whose treatment, men of all countries & of the greatest experience & highest intellectual powers have long & assiduously labored.

The remarks upon the cases, are the opinions of the writer, suggested by thinking over the circumstances of each; if these opinions be incorrect, he hopes that a more intimate acquaintance with disease, acquired either by reading or experience, may serve to dispel those errors.

John Little. Native of United States.
Aged twenty three. Previous health good. If was subject
slight colds occasionally, which, of late, have sometimes
been followed by swellings of the cervical glands & slight
cough & partial deafness. These symptoms disap-
-peared under the administration of Iodid Potash.

On Sunday July 18th 1852. he put on a wet shirt.
On Monday night he slept under an open window.
Tuesday morning he awoke feeling "badly". After getting
up, he dressed & walked out, but before he went far, he
began to feel as if he would faint in the street. Went
home, got to bed & after remaining quiet about an hour,
his condition was as follows. Pains in the left side,
more severe below the nipple, & shooting upwards
towards the clavicle when he made ~~a deep~~ an inspi-
-ration. Slight inclination to cough, which he
repressed as much as possible on account of the pain
it occasioned him. Unable to take a deep inspiration
Very feeble respiration over root of left lung,
with some rubbing sound at lower part of same
lung. Slight dulness on percussion.

Pulse 110, full & soft, respiration 40. Says he feels "very sick". Bled to six ounces, when it was discontinued on the occurrence of faintness. Calomel grs viii & Ten grains of rhubarb were given as a cathartic. Antimonii et Potass Tart gr. 1/16 every hour, to decrease vascular excitement, with low diet.

Ten hours after; the purgative had acted once, very freely. His face was flushed, skin warm, pulse too full & hard, respiration 32 & less painful than it had been, some pain still in side, roughness, & feeble respiratory murmur with some dulness, over posterior part of left lung; says he feels better. Took from his arm ℥xxiv of blood when faintness came on which caused its discontinuance. To continue antimony every hour.

July 21st 10 o'clock A.M. Slept well last night. Pulse 64 soft & tolerably full. Respiration 24. Slight dulness posteriorly, vesicular murmur nearly natural. bowels moved once. Slight pain on deep inspiration. Ordered to continue Antimonii Tartras gr. 1/8 every hour. Low diet.

July 21st 8 o'clock P.M. - Pulse 72 soft & tolerably full, lung resonant, all dulness having disappeared, respiratory murmur natural in sound; & number of respirations decreased to 17. Slight muscular pains in cardiac region - tongue clean & moist, no thirst, appetite good. Ordered continuance of same treatment -

July 22d Slept pretty well last night. Condition, if we except absence of muscular pains, the same as yesterday. Twelve hours after saw him in following condition, he having eaten potatoes & cooked tomatoes &c for his dinner contrary to advice. Pulse 88 full & soft, respiration 26. Shooting pains in Epigastrium not, however, very severe. feeling of fulness of stomach, skin hot, tongue coated, urine scanty & darker colored than natural, some thirst, flushed face & no motion of bowels since yesterday. Ordered Proto Chloride of Hydrargyrum & Pulvis Rhei grij. Bi Carb Sodae ℥ss. As cathartic & a continuance of Tart Antimonii gr 1/16 every three hours. If cathartic did not act before morning ℥j of Castor Oil -

July 28th. Slightly delirious during night. Slept none till 3 o'clock - had much fever & restlessness - Pulse 80 soft & tolerably full - Respiration 30 - No pain in taking deep inspiration - No thirst, tongue slightly coated - Ordered to stop Tartar Emetic & take Bi. Carb Soda fortiis Chlor Potass fortis - Aqua ℥j - Every two hours - At night said he felt perfectly well, the oil had acted three times since morning - No abnormal signs - To continue Iodas & Potass - On the 25th - two days after he was allowed to walk about the house, & discontinue all treatment. Lost in weight 19 pounds -

The diagnosis in the above case was Pleurisy, or inflammation of the serous membrane of lungs which is reflected over the ribs - the disease was seen early & treated actively, & in my opinion cut short before a large effusion had taken place. If the question be asked, What is the meaning of this a uness, pain, cough shortness of breath &c? My answer, without going into an elaborate explanation, is that serous membranes when inflamed, whether as a consequence of wounds or of cold, as in his case, are prone to throw out an effusion

In this case the effusion was into the cavity of the pleura, which effusion causes dullness on percussion & opposing a dense medium directly under the walls of the chest whose vibrations were thus, in a manner impeded. - Still inability to make a deep inspiration was in consequence of the patient instinctively refraining from doing that, which he had experienced was taught him must give pain; for he knows, or at least we know that by his inspiring deeply he fills up the vesicular structure of the lung & consequently causes the inflamed surfaces of the pleura to slide over each other. - The sensibility of this membrane when inflamed, as of any other tissue in the body, becomes much more acute & demands for it restoration absolute rest.

The feeble respiratory murmur is caused, if I may use the expression, by strata of watery fluid interposing themselves between the ribs & the substance of the lung & consequently exerting sufficient pressure on those vesicles nearest the surface to prevent their allowing the entrance of air in the same quantity & with as much freedom as it ordinarily enters when we hear the natural vesicular murmur; this together

the density of the medium explains satisfactorily this symptom. But how shall we explain the cough which is the characteristic one of pleurisy? If we say that the pulmonary structure or vesicle is the expanded termination of the bronchial tubes, & that these vesicles being in intimate relation with the inflamed membrane, become by the natural afflux of blood towards the inflamed part, engorged with blood; this engorgement creates irritation, which if continued runs on to inflammation; then we have an explanation by ~~saying~~ saying that inflammation of this vesicle or this extremity of a bronchus ~~being inflamed~~, gives us a peculiar secretion which, irritates the nerves & in order to be fully rid of by the lung must be coughed up. This explanation demands an admission of the existence of bronchitis, but in this case we have no positive evidence of such complication, we have no ~~[illegible]~~ moist or sibilant rattle, or no expectoration of frothy or viscid mucous.

In my opinion it may be explained by considering the nerves distributed to the pleura to be continuous with those which supply the bronchial tubes, & the superior sensibility existing in the part to which

they are distributed being communicated from the pleural along the bronchial nerves, inducing the sensation of irritation in the bronchi, giving rise to a reflex action to a kind of spasmodic cough.

If we know from the symptoms & consider the rationale of the treatment something more tangible may be reached.

The effects produced by the first bleeding were probably caused by the patients fright or excitation. We see however after an interval of two hours a very considerable effect produced, we have every reason to suppose, by the combined effects of the blood letting & tartar emetic, the pulse being reduced ten beats in the minute & the respirations eight. The results of the second bleeding are more manifest upon pulse & respiration.

Have we any reason a priori to expect those changes as the results of our treatment? We have, for we know that blood letting & Antimony decrease the amount of blood circulating through the system & consequently through the lungs. As a direct consequence the amount of work

the lungs have to perform in oxygenating this fluid. We see the disabled lung unable to expand fully & venesection had not been performed the amount of circulating fluid demanding oxygenation would call upon the disabled organ for extraordinary exertion & a compensation in the way of increased frequency must be made. Now in direct proportion to the amount of blood drawn, do you diminish the functional activity of the lung, as well as empty the enlarged vessels of & near the inflamed pleura & thus remove the cause of the painful inspirations & consequently permit the making of fewer full inspirations, which in the aggregate accomplish the same object as more frequent partial ones. Lastly you place the vessels in the most favorable condition to allow & promote an endosmosis of the already effused serum.

That these changes occurred we have evidence in the clearing up of the dulness, the cessation of all abnormal auscultatory signs, the perfect freedom in respiration the absence of all pain & the

disappearance of cough & all febrile symptoms.

The slight gastric derangement & consequent febrile excitement of the 22nd. arose evidently from imprudence in diet & were readily removed by the cathartic –

The next case to be reported is that of Samuel Brown. Native of England, but living a long time in this country. Aged 47. Previous health very good. Habits very intemperate. Whilst on a drunken frolic, got into some difficulty in a bar room & was struck on the head with an iron bar, which knocked him senseless for some minutes. Having gone home he began to feel badly & as unpleasant symptoms gradually increased, ~~when~~ he was sent to the Infirmary, in the following condition – Staggers slightly when walking. Speech & tongue tremulous. Eyes injected with blood, face flushed. Stomach very irritable being unable to retain any kind of nutriment. Appetite entirely gone. Pulse 100 full & soft. Contused wound as large as walnut over the junction of right parietal with occipital bone which

is very sensitive when touched, feels elastic when pressed
tongue coated. slept tolerably well last night if we
except some startings & mutterings.
Ordered May 10th 1852. To open the constipation &
apply a poultice. To drink freely of hop tea & if stomach
continue irritable to have a strong infusion of
green tea.
May 11th Although he slept pretty well during the night
the bloatedness of hands & tongue has increased.
irritability of stomach continues. Pupils contracted,
eyes injected, face considerably flushed, skin warm.
When not spoken to a tendency to sluggishness is
observed. Bowels freely moved. Urine normal.
pulse 100 soft & full. To continue yesterday's treatment
with the addition of a mustard poultice to abdomen.
May 12 Slept pretty well during the past night. The
mutterings & startings have gradually increased.
His pupils, face, eyes, & tongue are in the same condition
as yesterday. Stomach less, though still, irritable.
Answers to questions, short. More drowsy during the day.
Considerable heat of skin. bowels opened freely. Ordered
to continue yesterdays treatment.

May 13 His sleep though apparently continuous was troubled; he tossed about & muttered continually during the night. His face more flushed than yesterday, pupils very much contracted, eyes more injected, tongue coated & rather dry. Senses decidedly dull, & somnolence considerable through the day. Ordered broth & hop tea with cold applications to his head & Cantharides blister over abdomen & back of neck, after they shall have removed the cuticle, the raw surfaces to be dressed with Ung. unctum Hydrargyrum & lastly 1/10 of grain of calomel to be given every fifteen minutes.

May 14th Symptoms much the same except stupor which has increased & tremulousness of hands & tongue diminished. To continue yesterdays treatment.

May 15th. Remained all night & day in a muttering stupor. If asked a question, gives a short & seemingly mechanical answer, then relapses immediately into his former state. Evacuates bowels & bladder in the bed. Eyes injected, pupils contracted, tongue coated with a hard, blackish crust, stomach retains small quantity of broth. Pulse 94 full & compressible.

Ordered a continuance of yesterdays treatment, with the

abstraction of eight ounces of blood.

May 16th His muttering comatose state continues, his evacuations from bowels & bladder are frequent & involuntary. His general condition rather worse. Ordered a continuance of treatment, with a turpentine enema.

May 17th Coma & other symptoms continue. Tongue more thickly coated. Bowels moved five or six times in bed. Some bronchitis. No vomiting. Some subsultus tendinum. The calomel having, as yet, produced no manifest effect ℥ss of mercurial ointment was ordered to be rubbed into thighs & arms twice a day. Yesterday's treatment, excepting the enema, to be continued.

May 18th Evidences of mercury begin to be manifest by the appearances of his gums. Less stupor than yesterday, diarrhoea continues. Other symptoms about same as yesterday. Ordered nourishing diet & cold to head.

May 19th Decidedly better, answers rationally. Still passes excretions in the bed. Some bronchitis & diarrhoea. Continue injection of acetas plumbi. Cold to head, & watch him carefully. His symptoms gradually improved until the 22d when erysipelas appeared on his forehead & part of scalp. Ordered to be circumscribed with nitrate of silver & paint the affected part with tincture

of Iodine. For the bronchitis which continued he was ordered a Cantharides blister over his chest. His intellect being more obtuse than yesterday & his gums having healed, ℥ss Hyd was to be rubbed into thighs twice daily, the bath to be continued –

May 23d. Evidently much worse, somewhat comatose, pupils dilated. Conjunctivae of left eye of a dull & rough appearance. Pulse frequent & small. Skin, especially of his extremities, cold & clammy, that of his hand corrugated. Respirations 52. Mouth open, black crust upon tongue & sordes upon teeth – difficult to arouse, gives short mechanical answers. Eyes partially closed with the balls turned up. Breath horribly fetid – involuntary discharges from rectum & bladder. No decided paralysis. The erysipelas has not spread on the scalp. Ordered to paint again with iodine tincture – Got gradually worse till 3½ O'Clock P.M. when he died.

Autopsy, seven hours after death, showed that external wound extended through integuments to the bone, some pus escaped when we turned back the scalp. Dura Mater & Arachnoid appeared, to us, healthy. Pia Mater thickened. Substance of Cerebellum on both sides of base softened with some serous effusion. Ventricles &c healthy –

The above is one of those cases which require the nice powers of discrimination so useful, & I may add so necessary, to the skillful physician.

After a careful examination, the doctor concluded the symptoms indicated cerebral irritation excited by the blow, complicated with incipient delirium tremens. The manifestations of the latter malady being at the time better developed & more urgent, required, if not interference, at least the abstaining from active treatment of the suspected cerebral mischief. If we treated the case as one of simple irritation or inflammation of the brain caused by the blow, viz by free venesection, absolute diet, antimony & mercurials we must have lost the patient from delirium tremens. Disregarding therefore, in a manner, the distant danger the immediate one was met by the tonic & narcotic properties of the hop, which from Ten was given morning to overcome the gastric irritability. Under this treatment the tremulousness of tongue & hands diminished & comfortable sleep was procured.

The irritability of the stomach being a symptom common to both diseases, we had no right to expect its cessation

upon the removal of one. On the 18th we have the cerebral inflammation beginning to [illegible] fixed, as was evinced by the contraction of pupils, low muttering during sleep, short answers & increasing stupor. The Dr therefore judging that the danger apprehended from delirium tremens had in a great measure passed away, whilst that from cerebral inflammation was being gradually developed, endeavored to bring his system speedily under the effects of the great antiphlogistic, mercury. For this purpose small doses frequently repeated were given, which experience has proved to influence the system much more quickly than larger quantities at longer intervals. We see the disease steadily advancing & with the advance of the other symptoms the vomiting abating. This though apparently a favorable sign, is on the contrary a very unfavorable one, showing as it does that, from the extension of disease the brain is unable to appreciate its own condition & consequently the gastric sympathy cannot be brought into action by reason of the abnormal state of the great nervous centre, without the integrity of which these reflex actions cannot be performed.

When the effects of mercury began to be manifest we see a gradual improvement in all the symptoms showing that it was this agent which was effecting the good: & from this gradual improvement whilst under its influence we might reasonably have hoped to bring about a cure, & in my opinion, had not ~~syp~~ scrofulas broken out, & attacked by metastases the brain with such violence as to produce softening & effusion, the result would have been different. We may also notice in this case the different ~~effe~~ effects upon the pupils of inflammation before & after effusion had taken place. In the one we have contraction in the other dilatation

Ann McCahan. Aged 17. Native of Ireland. Two years in this country. Sister died of phthisis when about 17 years of age. Previous health has been good. About ten days before her entrance into the house "caught cold" which was accompanied with a chill & head ache. Took no medicine & continued going about until Dec 30th when she entered the Infirmary with slight cough & headache, feels chilly during day & slightly feverish at night. Some oppression in breathing. Mucous rales over posterior part of right lung. Bowels constipated, pulse slightly accelerated. Ordered to be cupped to six ounces over affected lung. Morphia gr 1/4 at night. Saline Cathartic. Medicine operated freely this morning says she feels better. January 2d Complained of pain under right scapula, increased in making a deep inspiration. Some cough without expectoration. Breathing short. Pulse 100 soft & compressible. Percussion revealed dulness under right clavicle, fine pneumonic crepitation over space of about two inches square. Bronchophony confined to same locality. Ordered to be cupped to ten ounces & to take

Tartar Emetic gr ½ every two hours.

Jany 3d. Slept well last night. bowels moved, truly pulse soft & good. says she feels much better cough decreased. no expectoration. dulness & fine crepitation continue not having extended.

Jany 4th. Some cough, with mucous expectoration no pain when inspiring deeply. No crepitation or dulness. says she feels well. pulse normal appetite pretty good. Ordered to continue ¼ grain of tartar emetic every four hours which she continued until the 7th without any return of the signs of pneumonia. The cough not having entirely left her she was given Gum Acacia, Bi Carb Sod. Vinum Ipecac ā ā ℥ij Aqua ℥vj. Half an ounce to be taken every three hours. She continued this until the 9th when she left the house perfectly well.

We have here clearly shown the great value of auscultation & percussion as showing in the first place that her primary affection was slight bronchitis & that her second & serious disease was pneumonia. In my opinion the diagnosis without these great aids must have been at best a conjecture & consequently a very

unsatisfactory basis upon which an honest & intelligent physician would wish to treat a disease, to say nothing of the pleasure not unmingled with pride it affords a watching of an science to be able to say truly & unhesitatingly, upon applying the ear or pressing over the thorax, such changes have or are about to take place, the disease has progressed just so far & with proper & active treatment it will go no further, & see from day to day, with almost if in many cases with as much certainty as if the patients diseased organs were manifest to all their senses, the advance or retrogression of the disease.

The physical signs had showed conclusively the first stage of pneumonia & showed that the disease was then of very limited extent, but experience teaches that this malady requires immediate treatment if we would ward off dangers which increase fearfully in magnitude as the disease progresses.

The diagnosis was engorgement of a certain portion of the lung, liable to extend itself to the surrounding parts & set up destructive inflammation. Now what were the indications for treatment? Obviously to remove this engorgement if possible & obviate the

necessary accurrence of these unpleasant symptoms.
But how were we to accomplish this desired end?
Certainly not by giving demulcents (as the non believers
in auscultation would have done for this case for I
contend that we had here no positive evidence of
the nature of the disease except that afforded by
auscultation & percussion) to allay cough which was only
a secondary symptom, but by the application of
antiphlogistic remedies to diminish the amount of
blood circulating in the inflamed organ & remove
the local congestion. As the symptoms were not
very urgent general bleeding was not deemed necessary
therefore the local was practised. Local bloodletting
& tartar emetic accomplished in the most satisfac-
-tory manner the duties assigned them & after three
days treatment we saw the removal of those formi-
-dable local signs. The Antimony was continued as
a matter of precaution for two days & to relieve the
congestion of the bronchial vessels, which caused the
continuance of the cough, this together with the demulcent
& expectorant mixture wrought entirely every trace of
pre-existing disease.

Caroline Smith, Colored woman.

Aged 35. previous health good, except about twelve months ago when she had an attack of quotidian intermittent fever which continued about two months & disappeared without any medical treatment.

About two weeks since had two tumours removed from her neck, the wounds from which have not entirely healed. States that during her menstrual flow she was engaged in the occupations of a cook & got her feet wet. that night felt headache, her catamenia had stopped with chilliness which lasted about two hours & was followed by ~~chills~~ feverishness. These symptoms recurred for three successive nights, when she came under treatment. On the fourth day, Aug 14th, she complained of violent headache, for which she was cupped back of neck & ordered warm pediluvia, as a recurrence of chill was expected about seven o'clock in the evening she took quinine pos & at noon. Castor oil at night if bowels were not moved during the day.

The chill came on at six o'clock, an hour sooner than usual, was of shorter duration & followed by fever which terminated in profuse perspiration.

January 15: No return of catamenia - Bowels have been well moved by the oil - pulse 65 soft & full, no head ache, appetite pretty good, but she has been confined to light diet - says she feels much better - Ordered to take two grains of quinine at noon -

January 16 - Had no chill or fever yesterday, slept well last night, had slight pain in head during early part of last night - says she feels perfectly well to day - No medicine ordered -

January 17 - Had head ache last night, for which had warm pediluvia without much, if any, benefit - pulse 65 full & soft, tongue slightly coated appetite good - Ordered Magnesia ℥ij -

January 18th Had, as usual, head ache last night - Pulse natural, tongue clean, bowels moved this morning - appetite good, Ordered Pulv Cinchona Comp ℥j - three times per day -

January 19th - Head ache last night less severe feels very well - to continue treatment -

Jany 21. Had no head ache last night, no return of catamenia - feels perfectly well - to continue -

Jany 23. No headache, no chills - Stop treatment -

The interesting feature in this case is the occurrence, in every way simulating an ordinary attack, of intermittent fever. The question arises could the paroxysms have been the results of the operations performed on the neck, or could they have been consequences of the cold & suppressed catarrhal independent of any malarious predisposition? In my opinion such could not have been the case, for although we know chills may follow in either case, we do not find them assume the same regularity or terminate in the same manner, as fever & profuse sweating, as in this patient & in fact we could not expect the same influence from quinine. That these ~~[illegible]~~ may have been the predisposing causes which brought into action the latent poison I will not attempt to deny, yet I see no evidence to make me admit even this. With regard to the nature & cause of this malady we have much difference of opinion, but I believe the most observant thinks it originates from the introduction of certain poisonous particles, called malaria, which act directly upon the blood & through it upon the nervous system.

It is contrary to experience to assume that

intermittent fever-

Fever arises spontaneously in healthy districts in those who have never been exposed to its influence

This woman had for two months been living in a healthy part of the city & during that time had been exposed to no source of malaria, we therefore are compelled to admit that the remnants of the disease capable of the reproduction of the malady had lurked in her system & exploded two months after all apparent traces had ceased-

We have seen the beneficial influence of quinine, it cured the disease, how we know not, perhaps chemically by neutralizing the poison, perhaps by some other property it may possess, as yet unknown.

We may however reasonably anticipate that the action of this agent will in course of time be explained upon rational principles, till then we must content ourselves with the knowledge that we possess the great antiperiodic, without the satisfaction of being able to explain the manner in which it exerts its influence.

John Walker. Aged 20. Native N.S.

Sailor by occupation. Has had several attacks of gonorrhoea. Has frequently had sore eyes not of the Purulent kind as this. Contracted present gonorrhoea about 20th March 1852, two days subsequently right eye became inflamed & exquisitely sensitive to light. On the day following that upon which his eye became complicated, his ankle joint & metatarsal joints became affected & caused him so much pain that he was unable to touch his foot to the ground. States that he never had rheumatism of any kind before.

April 8th the day of his admission presented the following symptoms. Gonarthroea in the second stage with gonorrhoea preputialis, gonorthoeal opthalmia the vessels of the conjunctiva much congested & seems running over the edge of cornea, great photophobia & lachrymation. Left knee much swollen, natural configuration of joint destroyed, very tender to the touch. Right ankle so painful as to prevent his touching foot to the ground. Ordered to be bled ℥x. Calomel & Jalap āā grx as cathartic, after the action of which to take ¼ gr tartar emetic

every three hours. Solid stick of nitrate of silver to be drawn around the corona glandis. Nit Argenti grs x Aqua ℥j as collyrium. Unguentum Hydrargyri to be applied to knee & ankle.

April 9th. Eye less, though still, painful. Joints little changed, bowels freely moved. Ordered cups back of neck & the continuance of the other treatment.

April 10th. Much improved, slept well last night very little febrile excitement. Eye less painful much less congestion of the vessels, less lachrymation foot easy, knee less swollen. To continue application of mercurial ointment, collyrium & tart Antimony.

April 11th. Eye very much better, no photophobia or lachrymation; foot much the same as yesterday, knee less painful & swollen. As he complained of collyrium irritating his eye it strength to be reduced to grs xj. Ordered Specacuanha Composita grs xj. Mass Hydrarg grs v at night. Eye continued to improve until 15th when it was pronounced well.

April 14th. Knee & foot very painful, swelling very slightly decreased. Ordered Morphia gr 1/4 at night. Antimonii Tart gr 1/4 every third hour taken with

℞ Carb Soda ℥ij
Ext Glycyrrhiza
Ext Taraxacum ãã ʒij.
Aqua ℥ij } Tablespoonful every four hours –

April 16th Knee & foot still painful, swelling of knee much diminished. Ordered Colchicum gtt. xv with other mixture every four hours. Continued tartaric & mercurial ointment –

April 17th. Phimosis with considerable redness & swelling of penis. Joints improved, pus running from penis – Swelling of knee much reduced. Ankle still painful –
Ordered Chapman's Mixture ℥ss. Three times a day.
Other mixtures to be stopped. Black wash to be injected under prepuce. Acetate lead wash for balanitis.
Instead of Hyd Sub Chloride Nitrate Argent, to cut joints from six five times daily –
April 21. Gonorrhoea improved, less phimosis & redness of penis – Joints much improved since nitrate of silver began to produce its effects – Can now bear his weight upon diseased foot, still some pain of knee – To continue treatment –
April 22d. Color & discharge changed from yellow to white, still some burning when he passes his urine. Swelling

of knee less, pain of foot confined to great & second toe - To continue Chapman's mixture & take twice a day with intake of silver ointment. Bowels not having been moved for three days he was ordered Magn Sulph grs xv -

He continued improving but, as the gonorrhoea did not improve fast, he was ordered on the 28th an injection of Nit Argent grij to ℥viij tepid.

Ap 29th - All pain & swelling of knee have disappeared slight pain still in ankle; no gonorrhoeal discharge since yesterday - To continue Chapman's mixture & injection with the Nitrate of Silver ointment to ankle & black wash -

April 30. Able to walk about. Still some pain in ankle. Slight running from urethra of a yellow color. Some burning when he voids urine. To continue Chapman's Mixture & injection & ointment to ankle -

May 10th - To this time has continued Chapman's Mixture & nitrate of Silver injections three times a day but as the discharge still continues was ordered to stop the two above mentioned remedies &

substitute

Balsam Copaiba	℥ss	To be taken in the course of two days -
Pulv Cubebae	℥j	
Gum Opii	gr j	
Magnesia	q.s.	

For the last eight days he has stopped the Nitrog ointment & has been allowing a stream of warm water to fall upon joints -

May 18. On the second day he took the boluses, all vomiting ceased, but when stopped the medicine, on the third day, the discharge returned. No pain or swelling in knee or ankle, but complains of heel when he walks. To continue boluses & the stream of warm water -

May 17 - Discharge continues, of a whitish color; some pain in heel when walking. Ordered to stop boluses & substitute Cubebs ℥j - three times a day which he used until the 20th when in conjunction he used as an injection

Sulphas Zinci	grs xij	Inject three times daily.
Sulphas Ferri	grs vj	
Vinum Opii	℥j	
Acid Sulphuric Arom.	q.s.	
Aquae	℥iv	

May 22d. No discharge from urethra to day. Still some pain in heel. To continue warm water & Cubebs with injection –

May 26th. Running stopped. Pain in heel slight does not prevent him from walking. To continue

May 28th. Very little pain in heel, no other symptoms of rheumatism. Left home to day to resume his occupation –

We have in this case well marked those troublesome & painful complications which sometimes attend Gonorrhoea. The rheumatism seems to require a subject to be exposed to the inclemency of weather & also to be laboring under some constitutional taint in order to develope itself, & although in its general characteristics it resembles ordinary rheumatism, yet it is less shifting in its character & seems to seize upon one or two joints where it remains for a long time in spite of the most judicious treatment –

It is also very liable to return upon exposure. We know that rheumatism always attacks the

fibrous tissues, & in the eye we have this structure.
In this case we presume that the disease made its
appearance in this organ two days after the gonorrhœa
came on, & on the following day the knee joint became
affected. Why this should take place we may
not be able to explain, but we know that in
many diseases we find similar structures though
removed from each other take an inflammation
as the heart in rheumatism; the ~~testicle~~ testicle
in parotitis &c. As experience has proved that
gonorrhœal opthalmia is rapidly destructive if not
actively & early treated, the doctors' attention was
especially directed to this organ whilst he, in
a measure, disregarded the primary seat of disease
that blood letting, tartrate of antimony & the local applica-
tion of nitrate of silver are capable of subduing
this terrible complication we have ample evidence
in the result & we may also notice the tolerance
of the nitrate exhibited when the disease was at
its height & the gradual intolerance when it began
to decline. We could hardly, a priori, expect such
a result. but of any single remedy in the materia

medicine. The nitrate of silver undoubtedly exercises the greatest influence over this disease. That blood letting should not exert so much influence over it, is accounted for by the fact that this great antiphlogistic exerts its beneficial effects chiefly in inflammation of serous membranes.

The gonorrhoea although a local inflammation, usually expending its force upon the genital organs, does not yield, as the ophthalmia generally does, to any specific plan of treatment, but must be treated upon general principles, and remedies must be changed to meet the particular indications which may arise in each case.

The sixth case is that of Adam Fisher, Native of Germany, aged 28. About two years in this Country. According to his own statement, not to be much relied upon, his previous health had been pretty good.

Entered the Infirmary in April for Epilepsy which he states he had of late. Whilst in the house saw nothing like ~~them~~ it, but he complained constantly of head ache, particularly in top of head & over brows. His heart was constantly palpitating in a very forcible manner. His countenance was very singular compound of mental inactivity with pain & an obstinate determination to disregard impending evil, wild look out of eyes. Remained some weeks under treatment during which time he was cupped over heart & back of neck & took digitalis for palpitation. Had pains in side when taking deep inspiration which were removed by cupping. Got slightly better of palpitation & head aches when he left the house.

Two weeks after leaving work started, the day being very warm, on a long foot journey during

which he fell upon the road, insensible, which con-
-tinued when he re-entered the house on the first of
June in the following condition.

Partial Coma. Epileptic convulsions which were
followed by delirium coming in paroxysms, some of
which were very violent, when he would break every
thing around. Pulse 80 full & bounding, face flushed,
particularly so about malar bones, peculiar wild
glassy appearance of Eyes. well marked risus sardon
-icus, at times quickly followed by sighing sobbing
& crying. vomits now & then. pulsations of heart very
violent heaving his whole chest, bellows murmur
made out some days after his entrance.

He was cupped back of neck & over his epigas-
-trium. Purged freely with Calomel. Which measures
were followed by temporary relief, but he soon
relapsed. his respiration became from hour to
hour more labored; after remaining in this condition
a few days during which he had paroxysms of
violent delirium, his respirations became eight in
the minute, pulse 72 full & strong, face flushed.
ordered to be bled about ℥j which when drawn was

cupped & cuffed. The coagulum floated in an unusually large quantity of serum. The blood letting caused at once to revive him & from having been in a comatose state perfectly insensible, his intelligence returned got up had a copious evacuation of his bowels & seemed very much improved. Even about four hours he began to relapse into his former condition & his respirations became very slow & at length were only 4½ per minute while his pulse was 72 & full & heart beating very violently. Bellows murmur very perceptible. Complete insensibility, eyes now fixed & staring, then half closed & turned upward face with an hectic flush. Skin moist & of natural temperature. Ordered Digitalis & Calomel.

The next day appeared in about the same condition when he was suddenly seized with a convulsion in which he died.

Post Mortem appearances. Nothing remarkable about external appearance of body.

On turning back the sternum many thread-like bands were found adherent to the pleural surfaces. Pericardium natural. ~~Heart~~ Heart very much

enlarged, particularly the left ventricle, a quantity of lymph incorporated in the mitral valves. In removing the calvarium about two ounces of serum escaped. Considerable effusion between dura mater & arachnoid. Great thickening of the anterior & superior surfaces of the arachnoid from old inflamation. Much serous effusion, mixed with the coloring matter of the blood, beneath the arachnoid. Serous effusion into both lateral ventricles. Inflammation of the chroroid plexus.

The post mortem confirmed the diagnosis of bellows murmur, by the fact of lymph being found in the auriculo ventricular valve, which appeared of recent date.

The pains which he complained of were explained by the bands of adhesion between the pleurae. The cause of the epileptic convulsions under which he had, according to his own account, for a considerable period suffered may have arisen from the irritation inflicted upon the brain by the thickened arachnoid which though constantly acting as a predisposing

cause & only needed some excitant to bring on the paroxysms. What this excitant was I can not positively say, but as he was almost if not entirely free from the convulsions when mentally & physically at rest in the house, we may suppose it to have been arterial excitement in the brain induced by physical exertion or mental emotion called into play by his daily occupation; besides this we recollect the heart was hypertrophied, probably from the constant & laborious duties which devolve upon one in his situation in life, or it may have been augmented by organic disease which may have existed longer than we suppose & this enlargement caused the blood to be sent to the brain in increased quantity & with great force as was shown by the violent pulsations of his carotids, by his flushed face & by his constant head-ache. would give rise congestion & enlargement of bulk, which would cause the checkered membranes to act as a mechanical constants in the same manner that a depression of the bony walls or spicules of bone would cause these convulsions.

If we assume these things & I don't think it a mere assumption we may reasonably suppose that the exertion of the walk & the heat of the sun with the state of his heart, brought ~~[illegible]~~ about violent arterial excitement & congestion of the brain, which caused him to fall insensible upon the road. Serous effusion was the result of this congestion & if we add to this the inflamation of the choroid plexus in the lateral ventricles, we have the explanation of the violent delirium, the coma & the slow stertorous breathing which made their appearances in the various stages of his disease.

After the bleeding we saw the temporary alleviation of the cerebral symptoms, as we might confidently expect from the determination of blood to another part & the emptying to a certain degree of the cerebral vessels. As reaction came on, we saw an increase of the stupor depending upon engorgement & further effusion, which thrown on the brain acted injuriously upon the par vagum ~~which~~ prevented the due oxygenation of the nervous structure in the lungs & consequently

further demonstrated, the frequency of respiration
therefore the due oxygenation of the blood,
which prevented long as a person under opium
remain as another excitant to those convulsions
which terminated his life.

An Inaugural Dissertation on DYSENTERY

Submitted for Examination to the Trustees, Regents, and Faculty of Medicine of the University of Maryland for the Degree of Doctor of Medicine by

T. Alfred Mitchell of Maryland

Acute inflammation of the mucous membrane of the intestinal canal may attack either the whole of the tract, from the stomach to the termination of the rectum, or only a part of it; and symptoms by which it is manifested are considerably diversified, according as its superior, middle or inferior portions are chiefly or exclusively affected. When the inflamation is located chiefly in the mucous membrane of the colon and rectum, the disease is characterized by griping pains in the abdomen, followed by frequent mucous bloody stools, straining, and tenesmus, and retention of the natural fecal constitu-

tu

appear, it is generally ushered in by a "sense of lassitude, want of appetite, bad taste in the mouth, depressed pulse, slight rigors, pains in the bowels, disorder at the stomach and bilious vomiting". As the disease advances the symptoms increase in violence, unless subdued by the powers of medicine, the pulse will become small and frequent, the tongue black, and sometimes vomiting of black matter, hiccough, extreme weakness, frequently loss of sensibility, cold extremities, exhausting diarrhoea, and finally, death closes the scene.

Throughout the whole course of the disease, little or no fæces are discharged spontaneously, the stools consisting of mucous mixed with more or less blood. Fæces are, however sometimes discharged, in form of

small

small, indurated, yellowish balls, called scybala, this generally happening when the disease commenced with costiveness, and this form is usually attended with more pain than when it commences with a diarrhœa of the bowels. Tenesmus is a constant and characteristic attendant on this disease, and the violence of this symptom is a pretty accurate criterion for the violence ~~of the~~ and danger of the disease. Pain is exceedingly violent just before the calls to stool, and a constant soreness is felt in the abdomen. Frequently there is great dysuria, occasioned doubtless by sympathy from the rectum. In most instances a considerable portion of blood is discharged with the mucous, sometimes a discharge of mucous without a mixture of blood or any fecal matter, and again

gruneous blood mixed with mucus or faeces - the abdomen becomes tender, the advanced and narrow lower lip frequently presents a cadaverous color and often assumes a corroding character, and have the appearance of the washings of meat - As I said before, in protracted and unsubdued cases, great prostration ensues; the pulse becomes small weak, wordal and frequent, the skin dry and harsh, the breath offensive; occasionally after these symptoms an apparent amendment occurs; but only lasts for a short time, for either the pulse rises and becomes better, and the violence of all the symptoms remit, restlessness increased, the stools become liquid, dark and offensive, the countenance hippocratic, the extremities cold, the tongue at first covered

with

with a white pin, [illegible] from [illegible] and dry to the touch and red and scaly on the lip and tongue. The urine high colored and scanty. Dr Ferguson, in his account of Epidemics, which prevailed in the British Campaigns in Spain and Portugal, says that, "in the aggravated form of the disease, there appeared one never failing symptom, which served him as a guide and diagnostic. The urine was high colored, even green ~~and~~ scanty and pungent, and these he regarded as indicative of the employment of Mercury."— These, the symptoms of this disease, I have derived partly from my own observation during attendance on a number of cases, the past summer,— partly from our talented Professor of Theory and Practice and partly from writings on the subject

jest, and the remainder of my lecture will be devoted from the same source. We have now proceed to investigate the causes, first however, to say a few words, rose the disease from diarrhoea, to which it bears a resemblance. Both may be accompanied by griping pains, both have the stools loose and frequent, but in dysentery there is tenesmus, mucous discharges and retention of natural faeces, or they are expelled in form of scybala. In diarrhoea the disease is more extensive in dysentery more severe.

Causes.

It has been ascribed to cold and wet, to malaria to contagion and to the use of unwholesome food. Cold or change in the atmospheric temperature is certainly a cause of intestinal inflamation, for if the body

be

be exposed to the chilling effects of a humid and cool night air, the extremities of the surface will be rendered cold, the blood recedes from the external to the internal vessels, and the liver in common with the other internal organs, becoming engorged with blood, will not only become further disturbed in its functions, but contribute directly to congestion in the portal vessels, and consequently, to the rise of intestinal inflammation.

The almost universal presence of torpor of the hepatic and cutaneous functions indicate very clearly atmospheric vicissitudes and miasm as the cause.

Dr. Johnson says, "In every case of Dysentery that has ever come within the range of my observation, two functions were invariably disordered from the very onset, and soon drew other derange-

ments

ments in the brain. These were the
pirations of the skin or the respi-
ration and biliary secretions. I ask
any one, who has attentively reviewed
this disease at the bed side, to produce
a single instance in which these functions
were carried on in a natural man-
ner at any period of the disease.
Contagion This has long been and still
is a mooted point, both sides have
their advocates. I am disposed to think
that it is not contagious, and while I
do deny the contagiousness of the affec-
tion, I am not ashamed to confess
myself unable to bring forward any
satisfactory argument against it. To give back
an immutable decision on the ques-
tion would be truly delightful and
grand. It appears, however, to be both
epidemic and infectious. Among the
various causes of dysentery, may be men-
tioned

tioned [illegible] and [illegible] and irritating [illegible] of all [illegible] vegetables, has also a tendency to [illegible] the disease. Not being sufficiently bland and stimulating to preserve the natural tone of the alimentary canal, giving rise to debility, which is a predisposing cause.

Autopsic Appearances. I have never had an opportunity of examining a body after death from this disease, but I have learned from our able Professor of Practice that there exists in the mucous membrane of the colon and rectum redness and thickness; peritoneal coat generally natural; when the disease has continued for a long time, there ~~disease~~ will be found some ulceration with extension to other parts — often covered with puriform secretions, resembling ulceration but if care be taken to wash off well

the

the intestine ulceration has not been found to exist. In protracted cases may be found gangrene a black bland hue and softening have appeared small and round sometimes large and irregular. occasionally perforating the intestines. The peritoneum sometimes is implicated, producing adhesion, and sometimes the omentum is affected and also the liver it may be either enlarged diminished or inflamed, especially in hot climates; in Bilious Dysentery the skin tongue and conjunctiva assume a yellowish hue.

Prognosis. The danger of the disease is probably in proportion to the extent ~~involved~~ of mucous membrane involved. also the violence of the symptoms, and the character of the discharges, when the discharges in the commencement consist almost entirely of blood, the disease is usually

much

much more tractable than where they are chiefly of mucous or mucous mixed with blood. Bathings of blood in the beginning are considered beneficial, perhaps by lessening the congestion in the pelvic vessels. The increase and continuance of the symptoms over a week, with a sympathetic state of the bowels, and collegnative pitid stools are very unfavorable signs. When tenesmus and tenesmus abate, at the same time, there is diaphoresis, and the appearance of bile and the natural fæces, we may regard the disease as tending towards convalescence—

Treatment.

When we come to consider that the disease is essentially inflamatory, and that confined generally to the lining membrane of the large intestines, and the usual violence of the

the symptoms in consequence of lesion
are manifestly two-fold. First, Remove the
local inflammation, Second Relieve the urgent
and distressing symptoms: but we may
also add that as the functions of the stom
and liver are generally more or less deran-
ged, another third indication is to restore
their regular action. First then, Remove
local inflammation which we accomplish
by blood-letting, both general and local;
general blood-letting moderates also the
febrile reaction of the heart and arte-
ries where it is excessive. Great diver-
sity of opinion exists among writers as
regards blood letting in this disease. Dr
Armstrong is a strenuous advocate for
decisive blood-letting, says he "Let bleeding
be once fairly introduced in the severer
modifications of dysentery and there will
be fewer fatal as well as chronic cases"
Condie is also an advocate for the lancet
"There

There are few cases to apply, says the Author, in his edition of "Practice of Physic", in which the cases to the application of leeches or cups to the abdomen can be dispensed with, without endangering ulceration, thickening, or structural changes in the mucous membrane of the intestines, by which, the sufferings of the patient are prolonged and his life endangered". And our own Professor of Practice is an advocate for blood-letting general, and the use of leeches twenty or thirty over the abdomen where pressure causes most pain, and when much tormina exists, he recommends as a small number applied near the anus, as giving almost immediate relief. The many painful symptoms attending this form of disease, as the tenesmus tormina and discharges of blood seem to derive there degree of violence from the excitement

of the sanguiferous system and are more readily removed by blood letting than by any other means we can employ. We believe it, however, upon the whole, in our country a much less useful remedy in Dysentery than in many of the other febrile miasmatic affections. Our great indication also embrace the employment of cathartics and diaphoretics. It is very rarely indeed that cathartics may not be used advantageously in this disease, much discrepancy of opinion, however, exists in regard to the use of cathartics in Dysentery. Says Dr Condie "While we cannot perceive any indication that purgatives are calculated to purge, which cannot be as effectually met by other less exceptionable remedies, we are convinced that the operation of purgatives cannot fail to increase in most cases the irritation of the bowels and to augment considerably the sufferings

of

of the patient. I however, am inclined to think that they are among our valuable remedies in this disease. The intestinal secretions appear to be highly acrid and irritating in this affection and cannot fail to increase the violence of the disease and sufferings of the patient when allowed to remain in the bowels; now cathartics seem particularly well adapted to their removal, and thereby relieve the intestines from a constant and painful source of irritation. Those cathartics, which accomplish our object most beneficially, are such as will produce evacuation with as little irritation to the intestines as possible, and among our most valuable aperients are Calomel & Castor oil; as soon as convenient after the commencement of the disease 8 or 10 grains of Calomel with Specacuanha, pro re nata, should be administered

lied, and followed by Castor oil [illegible]
Sandarac in the [illegible] of good hour
and it is advisable to [illegible]
quantity of Oil and Sandarac [illegible]
each evacuation. Occasionally the irritabil-
ity of bowels is so great, that even the
mildest laxatives have occasioned such
spasmodic contraction of the tube that
no fecalent discharges are produced;
Under such circumstances, a combination
of Opium with the cathartic so far from
impeding its operation contributes materially
to their apparent effects, rendering the
discharge fecalent and copiousl. I
would remark, however, that it is not
advisable to give Opium in the beginning
of the disease, or until inflammation has been
subdued by blood-letting. Where ten-
sion and tormina continue, continue the
use of the cathartic, and opiate to allay
spasm. a very good form is Calomel ½ gr.
and

and Dover powders, but by far the best is a combination of Calomel & Opium & if one Special is given, it is hence the saline preparation of Dovers powders is sometimes injurious. When such is the case, use Ipecac and Opium alone, when Calomel irritates, as is frequently the case, make use of Blue Mass or the Hydrarg. c. Cretâ. Many authors recommend that the constitutional effects of Mercury should be produced, but I am opposed to this practice. It probably is to be relied on in Epidemic Dysenteries, but certainly not advisable in sporadic cases.

Diaphoretics. Medical writers are divided in regard to the general use of diaphoretics in this disease. The disease has frequently a tendency to spread upon the skin in such cases diaphoretics are valuable; care should however be taken if the patient has to get up, the

greater

Cheerly. When administered [illegible]
Tartar may be used. Ipecac and Opium
prove an excellent remedy and Sir Jno
Pringle in his Observations on Diseases of
the Army, by Rush, speaks highly of
the Vinated glass of Antimony. After
the bowels have been thoroughly evac
uated by proper means, diaphoretics
in conjunction with Calomel are valua-
ble curative means, and probably one
of the best articles for this purpose
is Dover's powders. ℞ Opiat. Dr Chloroform G.v
Pulv. Ipecac. Com ℈j Mix & Chloroform vol. S. give one
every 3 or 4 hours, Plurisy root ℥ss xv vel xx,
with Ipecac and opium, is a favorite com-
bination with some. Diaphoretics should
be accompanied with the free use
of tepid mucilaginous diluents.
Emetics deserve in fact more consider-
ation in this disease than they appear to
receive. When the natural functions of the

the stomach [illegible] impaired
which is frequently [illegible]
found of the disease [illegible]
not only useless but injurious; But when
the stomach is greatly deranged as
shown by a loathing for food, nausea
and bilious vomiting, they are certainly
beneficial, as also when unripe fruit
or quantities of unwholesome food [illegible]
been taken, loading the stomach.
Some practitioners prefer one article and
some another. I think Ipecacuanha the
most beneficial as having a tendency
to allay intestinal irritation, and increase
the tone of the stomach. Prof Chew
thinks that frequently in the commence-
ment of a case, a large dose of Ipecac
will cut short the disease at once. Emesis,
by the concussion of the abdominal vis-
cera & gut, excites the foetal circulation
which is more or less congested in hyper-
aemia

-tion and strong alternation in
relation to the skin. On this indication
speaks for very active treatment
in consideration of the skin and liver, it met
by the preceding course of treatment viz
Blood-letting, Cathartics, Diaphoretics & Emetics,
second „ indication, Relieve any urgent and
distressing symptoms, as violent pains,
tormina and tenesmus, by blood-letting
both general and local, tenesmus gen-
erally relieved by a starch enema con-
taining 50 or 60 drops of Laudanum, some-
times adding Acetate of Lead as a Seda-
tive and Astringent, but astringents not
admissable until active excitement has
been subdued, and even then they are
of doubtful. Mr. Fleming recommends in
fections of cold water as the most
prompt and certain remedy against
the painful affections of the bladder,
with suppression of urine, that so frequent-
ly

by allowing bowel complaints to the latter stage be very serious especially neglect of food and opium combined with, of course, the other two, sorbitol also to Nitric acid, Tinct. opii and Camphor in doses of ℥j or more every sorbitol. ~~and~~

Chronic Dysentery is frequently a sequel of the acute form.
There is pain in the abdomen or pressure attended with tenesmus and genuine tenesmus with frequent watery discharges of a white mucous or slimy substance, and not unfrequently accompanied by portions of undigested food, sometimes Hectic comes on and the discharges increase both in number and in quantity, pulse quick and low, and increasing in the evening, tongue red and

skin

known. Skin dry, hard and [illegible]
frequently ulcerated and [illegible] slowly
and [illegible] wound. [illegible] Acute ulcer-
ation is generally seen in the stomach
and glands; the stools are variable in
number, quantity and quality. The pa-
tient generally lies on his side in bed
with his legs drawn up to relax the
abdominal muscles, the feet and legs
become sometimes edematous; sometimes
there is perforation of the intestines,
and secondary which is generally fatal,
but necessarily so however.

<u>Treatment</u>. Chronic Dysentery requires the
same general course of treatment as
the acute; the treatment however is not
very satisfactory, during the whole course
of the disease there must be rigorous
preserving attention to diet, mild and
uninitating, principally milk, even
milk alone, commends itself as we expere-
-mentally

Mentally, it is in [illegible] characters.
Local bleeding is [illegible] [illegible] and
sometimes injurious, Nevertheless where
much abdominal tenderness to pressure
exists or whenever indurations can be
felt beneath the abdomen, leeches or
cupping should be used. A stimulating
liniment may be useful, and where
much abdominal tenderness exists, a
portion of Laudanum may be added,
after friction, three or four times daily,
a flannel roller should be worn
around the body, blisters may occasion-
ally be of service. Specac with small
doses of Calomel or Blue-mass and
Hydrocyanic or opium are advantageous
in restoring to a healthy action the capilla-
ry circulation, in quieting the irritation of
the intestines & rendering the stools less
frequent and more natural. ℞ Calomel
Gri Dozen pounds xxxij. Hydrocyanic or
opium.

Opium grs. ij. [illegible] to the [illegible]
[illegible] Sulphate of Copper
and Opium. Nitrate of Silver grs iv
increased to 1 or 1½ Opium or Hyoscyamus
thrice daily. The Lesque Nitrate of Iron
[illegible] xv vel xx in mucilage night and
morning. Sulph. Iron Dil. acid ij. all
these agents are at the discretion of
the Practitioner when astringents are
required. Anodyne and opiate enemata.
Other valuable agents are Lime water, vegetable Bitters. Copaiba and oil of Turpentine.

℞. Ol Terebinthinae ℥ss
Saccharum ℥j
Vitell. ovi j
Tinct Opii ℥iss
Aq. ℥iij
M ft sol.

Sumatur cochlearia parva tertiâ quâque horâ. Strychnine has been highly lauded by some modern English writers, and sanctioned and advised by our own Prof. of Materia Medica in cases of

of to orth of a grain morning and evening. ℞ Strychniae Gr ss
Piccae pauis gd.
Ext pill no xiv.
Vel ℞ Strychniae Gr ss
Coniae Rosae ʒ ss
Ext Glycyrrhizae ʒ ss
Fiat pil no xiv
S. Give two daily gradually increased. Strychnine should not however be used when inflamation exists or when sufficient inflamation exists to cause any injurious effects During the whole course of the disease mucilaginous drinks should be allowed as Flaxseed tea, acidulated with lemon juice, if agreable to the patient, and Ulmus, which is perhaps the best as possessing slight tonic properties with the mucilaginous. Infusion of Columbo has been recommended by many during convalescence, also Inf Anthe-

-mis

Mist nobilis. In this stage, care should be taken to avoid indigestible and irritating food, Diet, light and nutritious. After the subsidence of the disease as Barley water, Oatmeal gruel, Rice, Arrow-root, et cetera may be used —

An
Inaugral Dissertation
on
Quinine Sulphas
Submitted to
the examination
of the
Provost Regents
and
Faculty of Physic
of the
University of Maryland
for the Degree of
Doctor of Medicine

By
Wm. H. Lassell
of Chester Town
Maryland

The history of the world for the last one hundred years, is replete with changes and improvement, both in the political and the scientific world.

The eagle of liberty has extended his protecting pinions over our favored country, from the Atlantic to the Pacific, and now reclines in all the glory of the noonday sun.

The names of Washington, Napoleon, and Wellington, stand out in bold relief, while those of Van Buren, Tenner and Andreal grace the historical page.

The gigantic intellect of Fulton, conceived the idea; and now the mighty engine impels the noble vessel o'er the boundless deep, and

the iron horse with lungs of fire and breath of smoke, flies thundering o'r the plains. While Ericson seems determined to force, even the etheriae atmosphere to minister to the progressive spirit of the age.

The thoughts of one are now wafted as swiftly, as the fire of heaven, over thousands of miles and recorded in advance of time

The astronomer has been rewarded, for his perseverance and exertion, by new worlds and planetary systems arraying themselves along the extended field of his telescope. While the microscope has performed no less wonders both in the animal and vegitable kingdoms.

During this onward march, the science of medicine has not been

stationary. The discovery of the anaesthetic agents; the recognition of the power possessed by cod-liver oil, to control and retard the fatal termination of phthisis, and the discovery of the protective agency of vaccination, have all contributed to its advancement. The chemist, altho' his crucible has never been forced to bring forth rich gold, or produce the "elixir of life", has contributed greatly to the advancement of medicine, by numerous useful and scientific discoveries, among the most important of which was the procuration of quinia and its salts.

Although cinchona, from which quinine is obtained, was long known as a remedial agent, it was found inconvenient, on account of the bulk

requisite to the production of its effect, and the consequent irritation to delicate stomachs; the chemist endeavoring, on this account, to procure its active principles, first obtained the extract, subsequently a substance known as cinchonia, and finally quinine. This together with all its salts was found to possess all the virtues of the bark in a marked degree, and also to possess the important advantage of a much smaller quantity producing the required effect, twelve grains of the sulphate being equal to an ounce of the best bark.

The most common form in which quinine is used is as the sulphate. This consists of white, flexible, silky, needle-shaped crystals, grouped together in tufts. Its taste is intensely bitter and

nauseous. It is found by analysis to consist of one equivalent of sulphuric acid, two of quinia and eight of water, as water of crystalization.

When heated to 212°F it effloresces and one half its water of crystalization is driven off; at 240°F one half the remaining water is driven off and the salt becomes of the consistency of wax.

Sulphate of quinine, is not very soluble in cold water, much more soluble in hot but it becomes precipitated on the cooling of the solution; it is less soluble in ether, much more soluble in alcohol, and readily soluble in dilute acid.

Quiniae sulphas, possesses all the properties of the best cinchona, being tonic, antiseptic, and antiperiodic.

As a tonic its dose is from one half to two grains two or three times a day; under

its continued use even in this dose, like other tonics, it causes derangement of the digestive functions; there is a sense of heat and oppression about the epigastrium, sometimes extending over the chest and abdomen: if the drug be now continued, it gives rise to irritation of the stomach and intestinal canal, which becomes evident by nausea, vomiting and diarrhoea.

When the full constitutional effects of the drug have been obtained, its action is evinced by more or less derangement of the nervous system; there is a sense of fullness and constriction experienced about the head, tinnitus aurium and partial deafness. If during this action the drug be continued or given in much larger doses, the derangement becomes more evident, there is violent head-ache,

the tinnitus aurium becomes more strongly marked and deafness becomes more apparent; there is vertigo, dizziness, dilated and immovable pupils, loss of the power of utterance, general tremors, and sometimes delirium, coma and general prostration; if the drug be discontinued these effects gradually pass off and the system returns to its normal condition.

As a tonic we can conceive of scarcely any diseases in which quinine might not be used with advantage in some of their stages: thus in the latter stages of typhoid, typhus and yellow-fevers it finds place, in the latter stages of pneumonia, in the exanthemata, in erysipelas with a tendency to gangrene, and indeed in all cases tending to run down into a low typhoid form, where all ex-

citement has been subdued. It has been used in scrofula, dropsy, some forms of dyspepsia, chorea, amenorrhoea, obstinate cutaneous diseases, and other chronic complaints.

As an antiseptic it is advantageously used to arrest gangrene. For this purpose it may be administered internally and applied to the affected part in the form of cataplasm or cerate.

But it is as an antiperiodic that quinine evinces its superiority over other drugs. In this character it seems to be a specific or at least the nearest approach to a specific, furnished by the materia medica

Hemicrania, facial neuralgia and indeed neuralgia of any part, assuming the periodic tendency, are often promptly relieved by its use. It has been used with

great success in dysentery, and diarrhoea of an intermittent or remittent form. It is said to have been used with benefit, to relieve the urgency of the hectic intermittents occurring in the latter stages of phthisis: Indeed quinine may be considered as a specific in masked or frank, open intermittents.

In addition to its antiperiodic virtues it seems to possess the power of neutralizing that subtile poison, known as Malaria; for we find the chronic diarrhoeas and dysenteries of malarious regions giving way under its use, while the enlarged spleen, engorged liver, and general dropsy, attendant upon or following intermittent or remittent fevers, or associated with the general cachexy common to the inhabitants of malarious districts, are relieved by no other treatment, as speedily as under the use of quinine.

In the cure of intermittents and remittents its action is not fairly settled; by some it is considered to act by causing a specific excitement which shall occupy the system at the time the paroxysm would occur; but it is most probable that it acts here also in virtue of its power of neutralizing the poison; under the first consideration it is necessary that the specific action of the drug be in full effect at the time of the expected paroxysm; all that the second consideration requires is that the full effect of the drug be experienced by the constitution previous to its expected paroxysm; now I have administered the drug, and the state known as quininism was certainly produced and existing in full force at the time of the occurrence of a violent paroxysm, and although no more of the drug was taken the succeeding paroxysm, was entirely prevented; ~~it is~~ from this and the

experience of others I would infer its action as an antidote, and if it be an antidote it should promptly arrest the quartan type even if administered, the day succeeding the previous paroxysm, in sufficient dose to produce its full constitutional effect.

Where perhaps is no subject on which there has existed a greater diversity of opinion than the propriety of administering quinine in large doses; and indeed upon its introduction into Pennsylvania it was denounced as a poison by many eminent physicians, and discarded untill they became forced to its use by the failure of other drugs; now altho death has been produced in many of the lower animals, there has not been a well authenticated death in a human patient caused by this drug, although it has been administered in the enormous quantity of an ounce and a half in eighteen hours.

with no other effect than the prevention of a malignant paroxysm. The idea of its poisonous effect undoubtedly arose from a knowledge of its effects on the nervous system, and it has been said, to have caused permanent deafness; but Dr. Mitchell thinks this excessive quininism may be obviated by employing sinapisms to the wrists and ankles for half an hour to an hour previous to the administration of the remedy.

From the following copied, from the British American Journal, into the November number of the London Lancet for 1845, it will be seen from an extensive experience, that large doses are the safest.

"In the first place, it has been shown by more than two thousand observations in this country, that large doses from ten to sixty grains or an ounce of quinine can be given without producing injury.

"2. That it has been proved beyond a doubt that these large doses do exert a curative effect on periodical and malarial diseases, and more certainly than small doses.

"3. That the cases of permanent injury resulting from large doses of quinine are not more, indeed not so numerous as from repeated small doses.

"4. That the temporary inconvenience or disturbance of the nervous system is not so liable to ensue from large as small doses.

"5. That so far from smaller doses being more certain, they are not; the paroxysm being much more likely to occur after their use than after a single large dose.

"6. That the impression made on the system is more permanent from large than small doses.

"7. That in diseases that run their course rapidly to a fatal termination, as in the southern country, a reliance on small doses was found to prove hazardous to the safety of the patient; therefore, when it is desirable to cut short or prevent the occurrence of a violent chill the large dose should be resorted to.

"8. That visceral diseases are not more liable to follow, if as much so, from large as from small doses of quinine."

The probable cause of the antipathy of many of the profession was a misapprehension of the accounts, supposing that the large doses were to be repeated as often as they repeated the small ones, whereas the fact is there is as small a quantity of the drug used and with less detriment to the system. While in common cases we would not approve of ounce doses of the drug, we have as little

sympathy with the one or two grain doses; it were better than either of these to maintain a respectable mean say five or ten grains, but in cases in which we have any reason to suspect malignancy the large doses are undoubtedly the safest.

Other subjects worthy of consideration are 1st. Whether quinine may be administered with safety during the pyrexia, &

2nd. Whether there is any necessity for preparatory treatment.

In answer to the first we would say, that in cases in which there is sufficient time to administer the drug during the intermission or remission, it would be advisable so to do, altho' it may undoubtedly be given with safety during the pyrexia, I have seen a case in which three grains of quinine was administered every two hours,

through mistake, during the fever, to a child labouring under remittent fever and not only without deleterious effects, but occasioning profuse diaphoresis, abortion of the succeeding paroxysm and speedy recovery.

The answer to the second subject viz: whether there is any necessity for preparatory treatment, is emphatically, No! but in cases of remittent fever where time does not press, it would be well to premise its administration by, ten to fifteen grains Calomel combined with an equal quantity of Rhubarb, or followed in the course of six hours if it do not act by Infusion of Senna, for the purpose of relieving the congestion of the liver and portal circle, which generally exists in Malarious affections. If there be much vascular excitement it may be relieved by de

pletion, diaphoretics &c.; the head ache removed by leeches, cupping, or sinapisms, to the back of neck; but if a decided remission do not occur, on the second or third day the drug may be administered, generally with the effect of removing the disease, and speedy recovery. This contrasts strongly with the old mercurial plan of treatment from which the patient arose, when he did rise, with a sore mouth and protracted convalescence. About the same plan of treatment may be used in intermittent fever, but is usually an unnecessary precaution, a single ten grain dose will sometimes abort the disease and it is generally necessary to repeat it some hours before the expected paroxysm and in the double quotidian, double-tertian and double-quartan a larger quantity is usually requisite.

When its bitter taste is an insurmountable difficulty, or if it cause extreme vomiting and nausea, quinine may be used as an injection, by friction on the surface or endermically being applied to the denuded cuticle in the form of cerate.

It may be administered in the form of Pill, Powder, or solution; the pills may be made with a little syrup. Gum acacia; to affect the solution it is necessary to add a few drops of an acid to the water, the best is the Aromatic Sulphuric acid, a drop for every grain of the salt.

From the foregoing we would infer.

1. That quinine in sufficient doses may be considered, as a specific against intermittents, remittents and all malarial diseases, as well as to possess tonic and antiseptic virtues.

2. That large doses may be safely ad-

ministered, and in severe or malignant cases, are demanded.

3. That when necessary, it may be given in the pyrexia.

4. That no preparatory treatment is necessary, for its administration.

5. That its specific influence may be derived, from administration by the mouth, rectum, endermically and by fraction.

Quinine has been highly recommended of lates, by Dr. Dundas as a remedy in the earlier stages of typhus and typhoid fevers; although the basis on which he founds his theory, viz: That these fevers are identical with malarious fevers, is absurd, still if it be a fact, if this drug can exert an influence over these fevers one of which is the endemic fever of this country, it is no less benefit to mankind, and if so, and there

seems to be, from the scientific experiments of others, some foundation for the assertion, there will be one flower added to the chaplet which surrounds its name, it may then be considered a greater blessing even than the discovery by Jenner, altho' one drop from the vaccine vesicle on a ragged urchins arm, was of greater value, than all the blood shed in offensive warfare since the creation of the world.

An inaugural dissertation
on
Typhoid Fever

Submitted to the examination
of the
Regent, Regents
and
Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine

By
John Alexander Hawkins
of
Harford County
Maryland
Maryland

In describing this disease, it will be my design to point out as far as I am capable; 1st ly, the symptoms which characterize the disease; 2dly, the cause as far as known; 3dly, the pathological changes peculiar to typhoid fever; and lastly the treatment.

Generally in the incipiency of the disorder, when the poison has been received into the blood we have the disease manifesting itself through the nervous system. The patient becomes listless, irritable, and debilitated. He is indisposed to use either body or mind, his appetite is impaired, he has pains in various parts of the body, his tung is coated with a whitish fur; and his bowels are irregular, more frequently affected with diarrhea than otherwise. These symptoms, which are denominated premonitory of the disease, last perhaps for three or four days, before the patient is obliged to take to his bed.

This however is not always the case. The patient is seized perhaps with a chill, followed without any previous disposition, by the ordinary phenomena of fever. The pulse becomes hard and frequent; his skin becomes hot and dry, and he is thirsty. Besides this he manifests indifference and stupor, his senses are blunted, his intelligence is diminished, and his muscular strength, perhaps, is so much impaired, that he cannot sit up in bed. These, I believe, are the principle symptoms observed in the first period of the disease. As the disease passes on the typhoid symptoms become more manifest. The pulse becomes more frequent, weaker, and more easily compressed, the tongue becomes brown, and dark sordes accumulate round the teeth and on the lips; and the eruptions, which are so often

present in this disease, appear at this period. Delirium, also, is a very frequent symptom in the second week. The eruptions above mentioned are the rose colored spots and sudamina. The rose spots are the most characteristic symptom of typhoid fever. They consist of small red spots, roundish, slightly prominent, about a line in diameter, and disappear under pressure, but return again on the removal of the pressure. They generally appear upon the breast and abdomen, extending sometimes upon the back and limbs. Their usual appearance is from the seventh to the fifteenth day. During this period there are several crops which show themselves, each crop lasting perhaps three or four days, and the whole period of eruption varies from three to fifteen days.
Sudamina are small transparent

vesicles, about the size of a pin's head, or perhaps larger, and of a circular or oval shape. They may be detected by the touch, but their detection by the eye, is obscured in consequence of their transparency, but this difficulty may be overcome by viewing the surface in an oblique direction. They appear more frequently in the region of the groin and on the neck, but they have been seen on various parts of the body. They are not however, peculiar to this disease, occurring in other febrile affections as well as in this. The period of their eruption is generally about the fourteenth day.

Tympanitic distention of the abdomen is another very characteristic symptom of typhoid fever. It is present in a greater or less degree, in almost all cases. It generally comes on about the seventh

day, but occasionly as early as the third. At first it may not be obvious to the eye, but it can be detected by pressing the part. It bears some proportion to the severity of the disease, being mild in mild, and greater in the severe cases. This morbid collection of air appears to be principally situated in the large intestine.

In the early period of the disease we have epistaxis, which is very indicative of the disorder. Hemorage may also take place from the bowels, but generly in a later stage. We have other symptoms, which are very corroborating; such as pain in the abdomen increased by pressure, gurgling sound in the ilio cecal region, diarrhea and frequently inflamation of bronchial mucous membrane. These, I believe, are the principal symptoms which characterize typhoid fever.

Cause, as regards the cause of typhoid fever, nothing definite is known. Some contend that it is contagious, and others have adduced facts to prove its noncontagiousness. I believe from what I can gather, that it remains yet to be proved, whether or not it is capable of being communicated from one person to another. Dr Wood states that he has seen a great number of cases, both in public and private practice, but never saw a case in which it could be fairly proved, that it was generated by contagion. Consequently he thinks, if it be contagious at all, it is only very slightly so, and under certain circumstances. That is where human beings are crowded together, with insufficient or unwholesome food, and confined and vitiated air. Any thing, which has a tendency to depress the vital power,

may not be a predisposing cause. Age appears to have a great influence on this disease. Thus it is stated, that it rarely attacks persons over thirty years of age, and scarcely ever those above fifty. The most common period is that between twenty and twenty-five years of age. This much, however, is known of the cause of typhoid fever, that it is a peculiar poison of a debilitating nature, received into the blood, and manifesting itself in that way. It appears that a person, who has once had an attack of typhoid fever, is exempt from a recurrence of the disease, at least as much so, as from a second attack of small pox

Pathological changes detected after death. There is scarcely any organ in the body, in which, there has not been

some deviation from the natural condition, detected after a fatal termination of this disease. The liver, spleen, stomach, and intestine, have all been found in a state of inflamation or its consequences. But that, which is characteristic of the disease, is wrought in the glands of Peyer, solitary mucous follicles of the ileum, and the mesenteric glands. The earliest period, in which opportunity has been afforded for examining them, was on the sixth day. At first they are found to be thickened, and slightly elevated above the surrounding mucous membrane, and exhibiting a grayish transparent surface; as the inflamation advances the patches become reddish, and the follicles perhaps burst, ulcerate or slough away, so that an irregular ragged ulcer is left,

being thickened edges. This ulceration is sometimes so extensive as to perforate the intestine, and give rise to fatal peritonitis by the discharge of their contents into that sack. When in the course of the disease, we have sudden and violent pain in the abdomen, we may be tolerably certain that the intestine has been perforated, and that a part of its contents has been poured out into the peritoneum. This is exceedingly apt to take place in the mildest cases, consequently the prognoses in this disease cannot be given with much certainty. These glands occupy that part of the ileum which is opposite the attachment of the mesentery, and are larger and more numerous as they approach the cecum. The solitary glands are similarly

affected with disease of scyr. They become in the first place larger and harder than natural, presenting a bluish coloured projection above the surface, and if the disease continues they fall into ulceration. The mesenteric glands are also frequently altered in their structure and appearance, but it is thought by some to be a secondary concomitant, the inflamation being extended to them from the elliptic patches.

Treatment. The indications to be fulfilled in the treatment of this disease, are first to remove all irritating substance from the stomach and intestines, secondly to moderate febrile excitement, third, to combat inflamation when it arises in any important organ, and fourth to support the patient when the powers

of life are beginning to fail. The first may be accomplished by mild cathartics, such as Epsom salt, magnesia or castor oil, which is better if there be much irritation of the stomach. If there be much irritation or much pain existing, we might combine with the cathartic a few drops of laudanum. If the diarrhoea be urgent if the stools be frequent and spontaneous, no cathartics will be required. But in the other hand if the stools be scanty or wanting we should endeavour to procure at least one full discharge every day. Second, if the patient be of a plethoric habit, with a full and strong pulse and a determination of blood to the head, we might resort to the lancet, and repeat the operation if strongly indicated by the symptoms

But I imagine that a rebellion of general blood-letting is very seldom called for. If we take blood, we should do it with great care and circumspection, in consequence of the knowledge of the depressing nature of the disease. Having determined on the propriety of venesection and acted accordingly, we should have recourse to refrigerants diaforetics. In this class we have several preparations, but the citrate of potassa is that which is most frequently given, either in the form of the neutral mixture or in the solid state. This may be given every two, three or four hours, according to the urgency of the fever. The practice recommended by our venerable Prof. Dr Chew of the administration of quinine would be best inserted here, as it generally gives the citrate of potassa

every two hours and the quinine in the hours between, in the dose of two or three grains. Cold ablution is very useful in abating the heat of the surface. The legs, arms, and temples should be frequently sponged with cold or tepid water whichever feels most agreeable to the patient. This may be applied to the whole surface if the skin be uniformly hot and dry. When there is much debility, exciting the application of diluted spirits is recommended. The patient may be allowed cooled drinks, or pieces of ice may be held in the mouth and allowed to melt. When severe headache, or delirium comes on the head should be shaved and cold applied by means of ice in bladders, or leeches may be applied to the

temples. For pains in the abdomen we may take blood locally by means of leeches, or we may apply warm fomentations, cupping glasses, rubefacients or blisters to the part. Taking care, however, in the application of blisters, that they be not kept on too long, as they are apt to produce injurious consequences. If the diarrhoea is profuse and depressing to the patient, we should use means to suppress it. Opium, combined with acetate of lead, lime or other mineral astringents, if not contraindicated. The nervous symptoms, such as restlessness, wakefulness, slight delirium &c, may be quieted by sweet spirits of nitre, Hoffmans anodine, valerian or opiates if not contraindicated. Now if the disease should persist, and all the

symptoms becomes worse the tongue brown
and dry the urine scanty, distention of
the abdomen increasing with weak
pulse, we should resort to mercury in
order to bring the system under its
influence as speedily as possible. For
this purpose we might give from a
quarter to one two or three grains
every one two or three hours, of calomel
or an equivalent of blue mass. If the
mercury should not produce a change
in the disease or if the tongue begins
to throw off its fur in flakes and ex-
hibit a shining appearance on its
surface, Dr Ward recommends the
oil of turpentine, in which condi-
tion the blades, that he never saw
it fail. He administers it in doses
of from fifteen to twenty drops in
emulsion of gum arabic, loaf sugar

cold water, with an addition of a few drops of laudanum if it irritate the stomach or bowels. The last indication must be accomplished by tonics and stimulants. Sulphate of quinia is the best tonic that we can employ, and brandy, wine and ammonia are the best stimulants. The diet should be nutritious, but very light. In the broad period of convalescence the patient should be watched with great care, in order to prevent what might produce a relapse. If the intestines should become perforated in consequence of the ulceration, our only means, I believe, is free and large doses of Opium in order to keep the bowels tranquilized and their contents in a solid state, as much as possible.

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Maryland.

Cinchona and its preparations

Perhaps in the whole catalogue of medicine there is scarcely a single agent more deserving of consideration than cinchona and its preparations; especially by the inhabitants of the South western part of Maryland, where intermittent and remittent fevers prevail annually from the begining of Summer to the latter part of Autumn

The terms Cinchona Peruvian bark &c are used pharmacologically for the bark of the different kinds of Cinchona obtained from the coast of South America. Of these the United States Pharmacopia

and mits three varieties, cinchona flava, cinchona pallida, and cinchona rubra, each of these requires to be considered separately.

The officinal term yellow bark is only considered applicable to the valuable variety of the drug having this color, which is known in commerce by the name of Calisaya. Druggists divide the Calisaya bark into two kinds the quilled and the flat. The appearance of both tell that they were taken from larger branches than those of the pale varieties. The quilled is in pieces generally from nine to fifteen inches long and from one to two inches in diameter; the epidermis is of a brownish color, marked by longitudinal wrinkles and transverse fissures

and yields a dark red powder; it is tasteless and possesses none of the virtues of the bark. The external surface of the bark after the epidermis is removed is of a brown color and possesses a bitter astringent taste. The flat variety which appears to have been taken from the larger branches and trunk resembles in character the quilled variety, except that the pieces which are stripped of their epidermis have externally a brown cinnamon color and are free from fissures. They are in pieces quite flat or slightly curved. The yellow bark possesses more quinia than any other variety of bark; and is consequently more used.
Cinchona pallida as met with in the shops is in quills from five to fifteen inches in length

single or double straight or nearly so, varying in size from that of a quill to that of the thumb, and from a third of an inch to two inches in thickness. The epidermis is of a grayish color. After the epidermis is removed it is of a brown color. It has a bitter aromatic and astringent taste and a smell somewhat resembling tan. As it yields but little quinia it is not employed in the manufacture of that alkali, which has now almost superseded the bark as a remedy in intermittent and remittent fevers. It differs from the yellow in containing cinchonia in the place of quinia. I believe it is the opinion of Physicians generally that cinchonia has almost as much control over periodic fevers as quinia, and should the tree

of the latter begin to fail the pale bark will come into more extensive use for the manufacture of Cinchonia. Cinchona rubra like yellow bark is imported in quills and flat pieces, the latter being the more common of the two, and occasionally very large as if taken from the trunks of trees; being from two inches to two feet in length, from one to five inches in breadth, and from a quarter to half inch in thickness. It is wrinkled longitudinally furrow and warty. The color is of a reddish brown. The color of the powder is much redder than that of the other varieties; so much so as to render the epithet red bark very appropriate. It has a bitter aromatic and astringent taste. The quilled variety is in pieces

of about the same size as quilled yellow bark. They are of a paler reddish brown externally than the flat pieces, and internally of a clearer cinnamon brown color approaching that of yellow. It is distinguished from the other varieties by containing kelleguinia and cinchonia in considerable quantities.

There are many other varieties of Cinchona bark but they have not been considered worthy of an official position in the Pharmacopeia of the United States Cinchona being so dear an article the powder is often found adulterated with spurious barks, and inert substances which are very difficult to detect. The most interesting and important constituents of Peruvian bark are the Cinchonia

quinia and acid with which they are combined. Cinchonia when pure is a white crystalline substance partly soluble in boiling water, almost insoluble in cold water, but very soluble in boiling alcohol.

Its bitter taste at first is not very obvious, in consequence of its deficient solubility, but is developed in a short time, by the solution of a minute portion in the saliva.

Its alkaline character is very decided, as it neutralizes the strongest acids, forming with them saline compounds. Of the salts of Cinchonia the sulphate is the most used.

Quinia which was discovered about the year 1820 is one of the most valuable gifts from Chemistry to Therapeutics. It is whitish and as usually prepared is rather opalescent in its appearance; not

Crystalline like cinchonia. It is more bitter, and almost insoluble in water; but is very soluble in alcohol. It unites with the acids to form salts which crystallize with facility.

The value of cinchona as a remedy was unknown to the civilized world about the year 1751; and even at that time its origin and nature did not seem to be generally known; for we are told that Sir John Talbot an englishman employed it with great success in France in the treatment of intermittent fever under the name of the english powder. He at length sold the secret of its origin and preparation to Louis XIV who dearly

When the bark is taken into the stomach it produces in a short time a sense of warmth in the

epigastrium and sometimes gastric irritation; nausea and even vomiting is sometimes produced, especially if the stomach was previously in an inflamed or irritated condition. After somewhat has elapsed the circulation generally experiences its influence as is shown by increased frequency of the pulse; and if the dose be repeated the whole system becomes more or less affected, and all the functions undergo a moderate degree of excitation. The action upon the nervous system is sometimes shown by pain in the head, tinnitus aurium, and partial deafness which are always felt by some persons when brought completely under its influence.

But besides the mere excitation of the ordinary functions

it produces the effects upon the system which are peculiar, and wholly independent of its mere tonic operation. The power by which it breaks in upon the chain of morbid action when administered in the intervals of intermittent fever is something more than what is usually understood by its tonic effects; for no other medicine however powerful may be the excitement produced by it, exercises a control over periodic fevers, that can be compared to cinchona or its preparations. It is generally believe employed and with advantage in all morbid conditions of the system in which a permanent invigorating effect is desired, if the stomach is in a state to receive it.

In low typhoid cases of

Pneumonia after the inflammation has been moderated by appropriate means this remedy is of the greatest advantage in supporting the system till the morbid action ceases; and I believe it may be used advantageously in all cases in which the system is exhausted and debilitated under purulent discharges, when the tendency is to recovery

But in all these cases the Physician ought to examine well the state of the system, and before resorting to this tonic to be certain that there is really a debilitated condition of the functions; and also that there is no local inflammation, especially of the stomach, otherwise it might increase the disease. But it is in the cure of malarious fevers that cinchona and its preparations display their

their extraordinary and specific powers.

There appears to be no fact in medical history more certain than their efficacy in intermittent and remittent fevers; very few cases will be found to resist the judicious use of bark or some one of its preparations. But before its administration in simple cases of remittent or intermittent fevers it is always best to prepare the system for its reception by the judicious use of Aperients Emetics &c. But before proceeding farther some observations may be necessary as to the varieties of the bark the form of administration and the time in which it should be used In the treatment of intermittent or remittent fevers either the red or yellow bark is equally preferable to the pale; one of the first two the red

is considered the most powerful. Experience had pronounced in favour of the red long before its superiority had been proved by analysis. The pale bark in its finest forms is thought by some to be better as a general tonic as it is less liable to offend the stomach. When the object is to make a decided and speedy impression bark is most effectually administered in substance, I believe it is not absolutely certain that quinia and cinchonia are its only active ingredients; for the bark in substance has been known to cure intermittent and remittent fevers when quinia and cinchonia have both failed.
But notwithstanding the efficacy of the bark in substance, in a great majority of cases it is

sufficient and even necessary to resort to some one of its preparations; for in many cases there is inability of the stomach to support the powder or the unwillingness of the patient to swallow it on account of its disagreeable taste.

The best one of its preparations and the one mostly used is the sulphate of quinia

The ~~facility~~ advantage of this preparation is the facility of administering it, the smallness of the dose and the possibility by its employment of introducing a large quantity of its active principle without offending the stomach.

The sulphate of quinia is now almost universally used in the treatment of periodic fevers; and the bark only resorted to after

this has failed. The proper time for its administration is during the intermission of intermittent and remission of remittent fevers and in simple cases as I have before said it is best to prepare the system for its reception: Then commence the use of quinine in divided doses, say for instance from three to five grains every two hours until its full effect upon the system has been produced. In the inflammatory form it is always necessary to subdue the active inflammation before resorting to the use of quinine. In the malignant variety it is necessary that the patient should should be brought under its influence as quick as possible. No time should be lost in preparing the system

for its reception; but the use of quinine should be commenced at once; notwithstanding there may be considerable fever. Large doses should be used; from ten to fifteen grains every hour until its full effect is produced. After convalescence from periodic fevers the patient should still continue the use of quinine in gradually decreasing doses for several days to prevent a relapse.

Quinine may be given either in pill or solution. The latter is generally considered preferable; as it is important that the nervous impression should be as extensive as possible; it must be of some advantage that the gustatory nerves should be impressed as well as those of the stomach.

Sulphate of quinia like cinchona may be administered in enema. and it has the advantage which Cinchona has not of being used endermically, when the condition of stomach forbids its use by the mouth. Three times the ordinary dose may be added to a common enema; and when it is to be used endermically from five to ten grains may be sprinkled on a blistered surface. Much more might be said in regard to the use of this valuable agent; but to enumerate all the cases in which Cinchona or its preparations might be used with advantage is beyond the limits of design

Annue audacibus coeptis

Dyspepsia.

The science of medicine comprises a wide field for speculation and theory; but unfortunately, for the medical tyro in regard to a display as relates to them, they have elicited essays from men of talents so superior and rare, that even, were he disposed to indulge in them, a laudable modesty would act as a restraint. None one, even bold enough, to make the attempt in his first essay, his efforts, though plausible, and original, too, with himself, might, from their similarity to others, be viewed as plagiarism. In fine, to write an elaborate essay on any subject, demands the energies of a mind of no ordinary degree of research, discrimination, and judgment — but more particularly does one appertaining to nosology require the aforesaid prerequisites, co-operative with

which, there should be a proportionate degree of practical experience.

After considerable vascillation in regard to the selection of a subject for a thesis, I have, at length, fallen upon that of indigestion, thinking that, as I have been a victim to its scourge myself, it may elicit as much original matter as any other nosological subject.

"The name" of dyspepsia, says a recent author, "is unfortunate, as, instead of expressing a particular pathological condition, it merely refers to a result which may flow from different and even opposite conditions of the stomach." Hence, according to name, it may be the result of irritation and inflammation. The same writer also says, "There is no doubt that a depression of the actions of the stomach constitutes, in many instances, the basis of a

distinct pathological state, which he proposes to restrict to the name of dyspepsia." With this restriction in regard to its name, it may be readily inferred that its true and uncompounded pathological state is, simply a depression and diminution of the powers of the stomach; weakness of its muscular coat; a perversion of the quality, and a change in the quantity of the gastric secretions; disordered innervation; and passive congestion and anæmia.

"Broussais and his disciples refined all those affections usually called dyspeptic to gastric irritation and inflammation. But this view has not generally prevailed."

That inflammation and irritation are occasionally merely incidental complications, is readily deducible from these facts; first, when coexistent with dyspepsia, they require for their re-

moral therapeutical agents that are counter to those indicated for the alleviation and cure of dyspepsia; - secondly, they leave behind them, when removed, the same depression and debility of the stomach that had priorly characterized the disease; and thirdly, - to be more explicit in relation to the ~~first~~ fact - stimulants frequently afford relief in dyspepsia while, to the contrary, they only aggravate and augment the symptoms when inflammation and irritation are co-existent. Dyspeptic symptoms, doubtless, oftentimes accompany gastric irritation and inflammation, bearing to them, in such instances, the relation of effect, and not cause. When thus co-existent with inflammation in the relation of effect - they, for the most part, disappear with its removal without invoking other therapeutic agents than are required for its reduction.

Symptoms.

There is no disease incidental to man that proffers a greater variety of symptoms than does the one now under consideration; owing, no doubt, to some extent, to the great participation of the nervous system, mental depression, and a perversion of the imagination consequent on hypochondriasis. It rarely exhibits a catalogue of the same symptoms in any two individuals. I do not intend to be understood as insinuating that its symptoms are so dissimilar as to render the disease difficult of diagnosis — because there is, in almost every case, a set of symptoms that plainly indicate the disease. After it has become chronic there appears, in some instances, to be a mitigation of its symptoms, without any apparent amelioration of the disease itself; or, in other words, the patient is not so much

harassed by it as he was in its incipiency — but does not gain flesh, nor improve in his exterior appearance. This was the case, especially with myself, which I attributed to constitutional tolerance and the dint of habit.

There is, in its acute form, in from two to four hours after eating, (sometimes sooner or later) frequently a strange, vague and uneasy sensation in the left hypochondrium, or at the epigastrium; sometimes amounting to a slight pain; and radiating thence to various parts of the chest and abdomen. They are frequently followed by, or accompanied with, sour eructations of chyme or food, gas, dull headache, and general indisposition. Nausea and vomiting frequently occur; regurgitation of chyme (frequently acid) into the œsophagus, and "the spitting up of food" occur too.

The stomach and intestines are often distended with gas, which is occasionally a source of much annoyance to the patient. Frequently, too, there exists a very troublesome sensation about the pharynx and fauces, occasioned by a viscid mucous secretion, that prompts the patient to make frequent attempts at clearing his throat. There is, sometimes, a burning and constricting feeling along the œsophagus — called heart-burn; considerable head-ache, "with tinnitus aurium, muscæ volitantes, unsettled pains between the shoulders, and in the back, with a feeling of coldness;" and fugitive pains in various parts of the body. Cardiac symptoms, as palpitation, are often very troublesome to the patient, exciting, in some instances, unpleasant suspicions in relation to heart disease. I well recollect when this was the case with myself.

A throbbing sensation is often felt at the epigastrium; and the pulsations are frequently so strong as to be visible. The cause of this phenomenon is referred to the pulsations of the abdominal aorta.

The mind, in general, is gloomy and despondent; and frequently to such an extent as to cause a total disinclination for the ordinary pursuits of life — The patient is frequently apprehensive too, — "looking wholly on the dark side of the picture." The sleep is sometimes disturbed by unpleasant dreams &c. To describe every collateral symptom of this affection would be a task of no very feasible character, therefore, I shall notice but a few more general symptoms, and pass on to its causes.

The pulse is sometimes small and weak, slow and

weak, and frequent and weak. It is often nearly or quite natural, and when presenting any abnormal deviation, it is a little slower. It is generally easily excited by physical exertion, but soon subsides to, or below its natural standard during repose.

The tongue is generally coated with a white fur near its root; and sometimes from root to tip.

The bowels are almost always constipated, when not themselves the seat of some disease to render them contrariwise.

The functions of the liver are generally disordered, and its secretions diminished, as are exhibited through the medium of the products of defecation. Sometimes the converse of this is the case, "bilious diarrhea and vomiting being the consequence through perversion of

the biliary fluid." I did myself vomit bile on several occasions while affected with dyspepsia - but without the least effect towards increasing the peristaltic action of the bowels.

The cutaneous surface is frequently dry, and of an irregular temperature; and the feet and hands are frequently cool; but the reverse is occasionally their condition, especially, at night. The face, in general, is pale ~~pale~~ and emaciated - Indeed, this disease, after having existed a while, is mostly characterized by paleness and general emaciation. Exceptionally, we now and then see persons with this affection presenting all the phenomena of an external character, that indicate good health.

"The urine is variably affected", being sometimes high-colored and scanty, depositing a lateritious sed-

iment after abending for some time; and also depositing, occasionally, after improper indulgencies at the table, a trace of albumen on the application of heat and nitric acid. This deposition is not persistent, generally, beyond a short period after such indulgencies if the patient refrain from them. The urine is very frequently clear and limpid.

The appetite is often whimsical also; sometimes being impaired, and sometimes increased to an extent that would be detrimental to the patient, were he to gratify it. In my own case the appetite was generally very good, except during the existence of nausea. I seldom felt, after taking what I deemed a sufficiency of food, that I had eaten to satiety.

Causes.

The causes of

dyspepsia are, in most cases those agents that impair the tone of the stomach by excessive stimulation. Hence, the constant and immoderate use of highly stimulating aliment, alcoholic drinks, narcotics, strong coffee and green tea, and the excessive use of tobacco, are prolific causes of this disease.

Large quantities of food, taken at a time, is another fertile source in its production, by overtaxing digestion, and overdistending the stomach, thereby conflicting with its physiological contractions. The habit of fast eating, or of bolting one's food, doubtless, often interferes seriously with the healthy contractions of that organ. It may exert a twofold agency in the causation of indigestion;— first,— by overdistending the stomach so suddenly as to prevent it from contracting on the food during its introduction into it, or by dis-

tending, it to such an extent as to wholly antagonize its contracting to its healthy and normal size; and secondly, by the introduction of food so imperfectly masticated as to effectually resist the solvent agency of the gastric juice.

Sedentary habits; a want of reciprocal adaptation of diet to physical exercise; and the use of indigestible articles of food are the most ordinary causes of this affection.

As there appears to be an intimate chain of sympathies between the functions of the brain and those of stomach, it would be natural to conclude that any thing, which would seriously molest the one, would necessarily conflict with the wellbeing of the other. Hence, the influence that the depressing passions have in favoring the occurrence of this malady — among which, may be

enumerated mental depression, sorrow, fear, despondency, solicitude, and slighted and disappointed affections.

Intense mental study frequently favors its occurrence when unaccompanied by a proper amount of physical exercise. The quality, as well as the quantity of food has much to do in causing it — as, also, has the mode of cooking. Hence, fried and baked meats should be eschewed.

Drinking too freely during meals has been said to assist in causing it, by overdistending the stomach, and so diluting the gastric fluid as to weaken its solvent power.

Hepatic disorder, or derangement, with diminished secretion of bile, has been said to be a cause in some instances — constipation being an ordinary attendant. In cases of this kind, dyspepsia would rather

seem to be a symptom, or complication of hepatic disease, than the original disease itself; bearing the same relation to it that it does to inflammation when a result of it.

In some instances, a too free indulgence of the appetite during convalescence from a protracted sickness brings it on. In fine, any thing that overstimulates and overtaxes the organs of digestion, may occasion it.

Diagnosis.

The diagnosis is comparatively easy. It may be distinguished from gastritis, by want of tenderness at the epigastrium, on pressure; by its tolerating stimulants and tonics, and being benefitted by them; and generally, by a tongue pale, and coated with a whitish fur, instead of being red as is sometimes the case

in gastritis. From duodenitis or chronic duodenitis, by the long interval between the time of taking food and the occurrence of pain or uneasiness, which does not generally occur until the food has undergone the process of chymification, and is passing into the duodenum. The diagnosis between it and hepatic disease is generally easy.

Prognosis,

This is generally favorable in regard to the patient's life. The disease, in some instances, is of long persistence, following and harassing the patient throughout life, with occasional intervals of ease.

There is but little doubt that if the disease were taken in its incipiency, and subjected to proper therapeutic and hygienic treatment, its victims would, in most cases, recover. One attack seems to render one more

susceptible to it ever afterwards.

Prophylactic rules.

As dyspepsia appears to be mostly incidental to those of studious and sedentary habits, I have generally looked on its predisposing cause as being referible to too intense mental application, and physical immobility; and on its exciting cause as being attributable to excess in diet. From this limited view of its etiology it appears that it needs not be an inevitable consequence with those, to whose avocations its seems so peculiarly liable.

Under this view of its cause reason, and common sense, themselves, would naturally suggest rules for its prevention and avoidance, which, if greeted by a timely observance and adoption, would, in the major part of instances, insure exemption from it.

The rules, alluded to, are rather hygienic than therapeutic, such as reciprocity between bodily exercise and diet; the avoidance of too highly stimulating and indigestible articles of diet; and a total abstinence from alcoholic drinks.

Regularity in respect to the time of taking food, bodily exercise, retiring at night, and rising in the morning, should be duly observed. The timely notice and observance of these rules would, in many cases, insure exemption from the disease; or when failing to do that, would render it comparatively slight, and more tractable.

Many other rules might be named, but as they are simple, and would have to be given in detail, I will omit them.

Treatment.

On the treatment of dyspepsia, there is one thing of paramount importance, to which, our inquiries should be directed in the onset; and, that is to the investigation of its cause. For vainly might we direct our remedies for the removal of a disease, while its essential cause were overlooked and left behind to antagonize our curative ~~effects~~ agents. Our endeavors, in regard to the exploration of its cause, assisted by frequent inquires as to some unsuspected article of diet, should not, at the expense of considerable time and assiduity, be abandoned. For in arriving at a true knowledge of its cause, we obtain an end for the adaptation of rational means; and are enabled, to wrest, as it were, from our antagonist, his own effectual weapon, and make it inservient to our own purposes, or

to render him comparatively innocuous.

If when called to see a patient with dyspepsia, complicated with, or dependent upon, gastric irritation and inflammation, the general indication would, frequently, be the employment of some antiphlogistic means proportionate to the intensity of the symptoms. If there should be much nausea, with ineffectual efforts to vomit, and the stomach be loaded with undigestible food, the exhibition of a mild emetic, as ipecac. to empty the organ of its irritating contents, would be advisable. If there should be much tenderness at the epigastrium, and pain, the local abstraction of blood by cups or leeches, followed by warm fomentations would also be advisable. Should the bowels be constipated, or distended with fecal accumulations, a mild and univer-

dating cathartic, or an enema, or both conjointly, would be indicated

As a purgative the following might answer well, "blue pill iv to vi grs. Pulv. Rhei iv to x grs. and extract. Hyoscyami j gr" and a purgative enema if these should not act, and a brisker cathartic could not be tolerated - For pain, we might use opiates, epispastics, and local bleeding - the latter being prominently indicated when pain is dependent on vascular excitement or inflammation. Obstinate vomiting or nausea dependent on simple irritability, should be counteracted by drinks of lime water and milk, hydrocyanic acid, "calomel in small doses," creosote, "continued aperient ~~aperient~~ action by j gr. of Aloes, given every three or four hours", sinapisms, blisters, counterirritation by croton oil; and when these all fail, the inhalation of ether or chloroform

might succeed.

The principal indications in the treatment of simple dyspepsia are, first, "to remove sources of irritation"; and secondly, "to impart tone to the stomach." The first indication may generally be met by the exhibition of a mild emetic, when the stomach is loaded with irritating ingesta, and when not forbidden by the existence of pregnancy or hernia. It may also be met by a combination of blue-mass, rhubarb, and hyoscyamus, or by some other gentle aperient.

The second indication may generally be met by tonics, vegetable, and mineral, in unison with an unirritating and easily digestible diet, and the observance of proper hygienic rules. Of the vegetable tonics, gentian-columbo, and

quassia, are probably the best. They may be combined, or not, with some of the alkalies and aromatic stimulants, as acidity and torpidity call for them.

The mineral acids sometimes prove antacids, indirectly through their tonic effects. The chalybeate preparations are generally useful; and especially so, in anemic cases. During the exhibition of any of these agents the patient should be especially cautioned as to diet — because errors in diet are its most frequent causes. Frequently, the disease is protracted, in defiance to remedies, by errors of this kind, which, when they are detected and corrected, soon subsides.

The combination of an aromatic stimulant, a mild purgative (as rhubarb) with the vegetable tonics will often be found to yield

a good effect when much torpor of digestion and constipation are co-existent. I once realized much benefit from a preparation of this kind myself, when the above-named conditions were coexistent.

In alkaline indigestion — a form of dyspepsia characterized by want of acid in the stomach, nitric, sulphuric, or ~~and the~~ muriatic acid, given in a diluted state, has been recommended. One necessary precaution, in taking them, is, to prevent their coming in contact with the teeth.

One chief indication in this, as in all other diseases, is to attend to urgent symptoms. Among them, in this disease, may be enumerated, gastrodynia, pyrosis, heartburn, and palpitation. For pain, when not dependant on irri-

tating ingesta, use opiates, prussic acid, opiopactics, &c, Opium should generally be avoided, if possible, on account of its power in locking up the secretions.

For pyrosis, nitrate of silver; "a combination of sulphate of iron, aloes, and aromatic powder," trisnitrate of bismuth, the mineral acids, and lime water have been recommended. Nitrate of silver and trisnitrate of bismuth are highly lauded in pyrosis. They should be given in combination with opium. "If the liquid discharges be sour: magnesia, bicarbonate of Soda, may be given." When an anodyne is required, it may be combined with the aromatic spirit of ammonia. Blistering or counterirritation is occasionally useful.

When the bowels are inactive, "carbonate of potassa, powdered columbo," and a few grains of rhubarb," all combined, are useful; or a combination of bismuth

and rhubarb may be very advantgeous. Should inflammation exist, in connection with pyrosis, it should be treated as premised before.

For heartburn, soda, potassa, liquor. potas. and lime water alone, or with milk, may be administered.

Palpitation, when co-existent with dyspepsia, is generally an effect of it, and consequently demands for its alleviation and cure, some remedy that will eradicate the cause that gives origin to it. When it is caused by acidity alkalies are indicated; when the result of the effect of fæcal accumulations in the large intestines cathartics, or purgative enemata may be resorted to; and when produced by flatulence, "bicarbonate of soda X to XV grs., aqua menthæ ℥ss. or tinct. cardamon. X to XV gtts. &c, may be given.

In cases of anemia, some of the various preparations of iron may

be given with much benefit - among which, the carbonate or muriated tinct. ure might be preferable. The carbonate, may be combined with aloes, rhubarb, and the aromatic powders. as the indications may point out. In cases complicated with hepatic derangement, with diminished secretions, a blue pill or two, on every alternate night, and followed in the morning by a mild saline purgative, if they should not move the bowels, would, no doubt, be useful - This course should be discontinued as soon as the secretions are restored and the bowels become regular. A combination of blue mass and rhubarb might answer, as well, or better, the same indications. As to dietetic rules, the utmost caution should be urged against their violation. The patient should abstain from all indigestible articles of food, and abandon any such article, how great soever a favorite, it may be. The quantity, as well as the

quality of food should be duly observed. It is a good rule for a dyspeptic never to eat to satiety. Regularity, as to the time of taking food, should be regarded - the patient making the intervals between meals sufficiently long for the stomach to digest its contents and to have some interval of rest. Exercise is another thing of paramount importance, when well-timed and regularly performed. It is said to be disadvantageous immediately after taking meals, by calling off the blood from the digestive organs to those of locomotion. Among the indirect tonics, exercise having been named, are the cold bath, when followed by a healthy reaction, friction on the skin, sea-bathing, travelling, cheerful society, and innocent diversions. The cold bath is generally more beneficial when taken early in the morning and followed by exercise. It is advisable to use friction on the

skin immediately after bathing.

When all the aforenamed measures fail to effect a cure, a change of locality and circumstances may occasionally be productive of some benefit.

A
Clinical Report
Consisting of six cases
Submitted to the examination
of the
Provost Regents
and
Faculty of Physic
of the
University of Maryland.
For the degree of
Doctor of Medicine
By
William Griffith, Kidd
of
Maryland.
1853.

To
George W. Mettinberger,
Professor of Materia Medica
and Pathology, and late
Demonstrator of Anatomy
in the
University of Maryland.
This Report is
Respectfully Dedicated,
as a token of regard,
For his professional attainments
and gratitude for his kindness,
By his pupil,
the
Author.

Hemicrania Treated by

Drs Thomas and Chew

Joseph Bryson. Sal. of Virginia: Aet 27, admitted into the Balto Infirmary June 15th 1852. Last winter while residing at Portsmouth Va, he was engaged as a night watchman and consequently was exposed to the extreme inclemency of the weather. He states that about the first of last April he felt a slight pain in the left temple which gradually increased being worse in the earlier part of the evening, this continued about one month when he was compelled to quit work and apply to a Physician; who gave some medicine which purged freely without relief to pain in the head; the pain increasing in the temple, with a tearing pain extending over the left half of the occiput, he employed another Physician who applied a blister to the temple over the seat of pain

removed the cuticle and sprinkled the denuded surface with a white colored powder and administered powders of white color internally, which gave relief for the time being. Another Physician's advice was asked, who stopped all previous treatment by a report which he sent to the Infirmary; says, Joseph Bryson came under my care about three weeks ago, with alimentary canal in a good condition, free from fever, with surface cool, tongue moist. I immediately gave Sulph Morphia grs ½, which soon palliated his sufferings during the diminution of the pain in the head; gave Quinine grs v, Carbonate of Iron grs x, three times a day; he experienced some relief, Ferri grs v, three times a day, dry cups and Chloroform externally. When admitted into the Baltimore Infirmary, complained of very sharp pain in the left temple just above the Zygomatic arch, with a tearing pain extending over the

left half of the occiput; no pain along the spine or any other part of the body upon pressure, has but little appetite, feels tolerably well, except pain in head, want of appetite and costiveness.

June 16th Was seen by Dr Thomas the attending Physician; who ordered, Hydg. Bol Chlo grs X Jalap ℈j to be taken immediately also the following.

Mag Sulph ℥ij
Mag Carb ℥ss
Aqua Menth ℥v
Tinct Colchi ℥iij

A table spoon full every three hours.

Ext Aconite grs xij
" Hyoscyamus grs xxjv
Sill Hydg grs xij

Mk pills xij - A one every three hours at night when he has pain.

June 17th Feels better this morning ordered continue, Colchicum mixture and Aconite pills, medicine purged freely yesterday, slept tolerably well last night.

June 15th feels worse to day, no sleep last night bowels regular; generally has one or two paroxysms of pain in the head during the night, ordered stop previous treatment.

℞ Veratria grs vj

Adipis ℥ij

use as a local application to seat of pain, internally, Carb Ferri ℥ss three times a day.

June 19th The paroxysms came on at 11 and 1.0 Clock last night, powders sicken him, ordered to be stopped and give Syrup Chloride Ferri et Sodium; there being none in the house he did not get any to day.

June 20th Pain in the head very severe, stomach slightly irritable, conjunctiva and tongue pale anorexia, ordered, Syrup Chloride Ferri et Sodii, teaspoon full every two hours, continue veratria ointment

June 21st felt considerably better to day until 9.0 Clock P.M. when pain quite as severe as ever returned, preventing him from sleeping, ordered continue treatment.

June 22nd Head pains as bad as ever slept some to

day a little irritability of stomach stop syp Chlo Ferri Et Sodii.

June 23rd Had a comfortable nights rest last night, this morning considerable pain in the head of lancinating character, less severe than yesterday pulse slightly accelerated, ordered discontinue Veratria ointment.

℞ Aqua Bromia ℥vj
Aqua Fontana ℥vj

as a local application to the seat of pain, internally syp Chloride Ferri Et Sodii, teaspoon full every two hours.

June 24th Pain not as severe as yesterday continue treatment.

June 25th Pains worse, pulse 84, stomach irritable, much nausea ordered continue treatment also.

℞ Bi Carb Soda ℥ij
Aqua — — ℥vj

tablespoon full to be taken when nausea is experienced

June 26th Symptoms same; continue treatment.

June 27th Complains more of the head, got but

little rest last night ordered, ℞ Liquor Arsenicalis gtt X, three times a day, continue aqua Bromia locally every two hours, without dilution.

June 28th Pain not so severe, being confined more to the temple, continue treatment.

June 29th Pain in the temple worse no pain but a soreness over the occiput, continue treatment, teaspoon full Syp. Chloride Potassi Et Sodii every three hours.

June 30th Feels better to day than yesterday; continue treatment.

July 1st Worse to day, pains extending over half of the head, more severe in the temple, extending down to the left eye; ordered stop previous treatment. ℞ Quinine Sulph ʒ ss

Cast Potassi ʒ iij

Ft Cat vj, one every two hours. Cannot take powders as they are immediately rejected; Rested well last night after taking gtt xl Tinct Opii.

July 2nd Condition as yesterday ordered continue powders.

July 3rd Vomits every powder he takes head no

sze; ordered sesame Syp. Chloride Ferri Et Iodi:
July 4th Continues worse ordered sesame Sig-
nos Arsenicalis and continue Syp Chloride
Ferri Et Iodii.
July 5th Feels a little easier to day, ordered Acu-
puncture needles and galvanism, continue
treatment.
July 6th Feels a little better than yesterday,
continue treatment.
July 7th not so well to day continue treatment.
July 8th, 6 O Clock, A. M. felt about the same
as yesterday, at noon felt worse, about 1 O. Clock
experienced all over the body a singular sensation
as if pricked by needles, this lasted but a few
minutes when he felt the same as before.
July 9th, About the same as last evening.
July 10th Pain has left the occiput where there ex-
ists considerable soreness; pains in temple sh
arper than they have been for the last few days
continue treatment.
July 11th Feels about the same as yesterday stop
previous Treatment.

℞ Mag Carb ʒj
Mag Sulph ʒij
Aqua Menth ℥iss
Vin Colchi ʒiij

A table-spoon full three times a day apply Aqua Bromea undiluted to seat of pain.

July 12th Pain in head the same with a slight numbness over the whole body

July 21st Has been gradually improving since the 12 inst; severity of pain has diminished, now confined to a small space above the ear, temple feels sore. stop Bromine water it has produced an eruption.

July 24 Feels quite as bad as when he first entered the house, Ordered by Dr Chew Sulph Quinine grs iij every hour until it produces singing in the ears; then gradually lengthen the interval.

July 26th Feels better this morning; there was a short interval last night when there was no pain; pain slight in temple; back part of head feels sore, continue grs v Quinine every hour until it effects the head.

July 27th Feels much better, frequent intervals when there is no pain; this morning for about half an hour the pain ceased in the left side of the head and affected the right; bowels not moved since the 25 inst, Quinine has not produced its effects, if bowels are not moved by bed time give ℞ Rhei grs x in pill

July 28th Did not get ℞ Rhei last night bowels bowels not moved yet; complains of a slight dull pain in the head roaring in the ears continue Quinine.

July 29th Symptoms same; no operation from the bowels; ordered as an aperient.

℞ Pulv Rhei grs v
Magnesia ʒß

continue treatment.

July 30th Feels much better to day, suffers only from a severe headache, bowels moved freely.

July 31st Condition same continue treatment.

Aug 1st Feels better, stomach rejected medicine this morning consequently has not taken any to day.

Aug 2nd Feels worse, lancinating pains all over the head, costive, ordered for head Powders Solution gtt v every four hours, for costiveness Oleum Ricini ℥ij stop Quinine.

Aug 3rd Feels better, continue treatment until effects of Arsenic are visible.

Aug 4th Head about the same bowels moved frequently since yesterday, stools bloody Dysentery supervening all treatment was stopped.

Sept 21st Has recovered from a severe attack of Dysentery, head feels tolerably well and has been so for the last two weeks, has taken no medicine for head since Aug 3rd left the house to day.

Dysentery.

Treated by Rep Chem.

John O Hisa, Native of Ireland, admitted into the Baltimore Infirmary July 27th 1852, has been in America six months, previous health good, of temperate habits was taken sick about ten days ago, while working near the City in a stone quarry, first taken with frequent evacuations from the bowels which were thin, yellow and mixed with blood; was under treatment previous to coming in; - when admitted, complained of frequent bloody evacuations from the bowels, with much tenesmus, and severe pain over abdomen. was ordered cups over descending colon. ℞ Oleum Ricini ℥ij

Aqua Lysp Rhei ℥ij

Gum Acacia ℥ij

Vin Ipecac ℥ij

Aqua Camph ℥iijss

Tarcyoric ℥ss

A table spoon full every three hours until it

produces fæcal evacuations.

July 28th Cupping relieved the pain; pulse 80 tolerably full and strong, tongue slightly furred, edges clean red, anorexia, little pain along the transverse colon, bowels moved very frequently, stools thin and watery no blood; 2 oz of Oleaginous mixture.

℞ Creta Preparata
Pulv Acacia
Sach Alba āā ℥ij
Aqua Camph ℥v
Tinct Opii ℥iss
Tinct Kino ℥iv

S. a tablespoon full, after each operation.

July 29th Pulse 72 natural; feels about the same as yesterday, stools not so frequent, no griping some pain in abdomen, continue chalk mixture, and if evacuations become bloody give Oil mixture

July 30th Tongue coated with a whitish fur, pulse 84 full and strong, upon pressure pain over ascending and transverse colon, bowels

moved four times during the forenoon, no blood
no tenesmus or straining, ordered four cups
along the colon and continue chalk mixture.
July 31st Pulse 68, tongue furred, little or no pain
in abdomen; five or six ejections within the
last eight hours, which were thin and watery.
Continue treatment.
Aug 1st Feels better, tongue not coated, pulse
72 natural, bowels moved three times to day.
stopped medicine last night, eat something wh-
ich was thrown up.
Aug 2nd Feels better; is not taking any medicine
bowels moved four times to day, retains what he eats.
Aug 3rd Complaines of being very weak, no appe-
tite, ordered a few doses of Chalk mixture.
Aug 4th Feels about the same as yesterday, has
stopped medicine; bowels moved twice to day.
Aug 5th Feels tolerably well to day; had pain
in stomach last nigh, if return of pain in
stomach, apply mustard plaster.
Aug 6th Feels as yesterday excepting a slight
soreness, where mustard was applied.

Aug 7th does not complain of anything he staid in the house a few days and left well.

Dysentery

Treated by Dr. Chew.

William Incredle Aet 38 Nat of Ireland has been in America two months occupation farming previous health good, says he uses alcoholic stimulants moderately, On monday the 26th was on a frolic until next morning the 27th On the evening of the 27th he was taken with loseness of the bowels, stools thin and watery, continuing so until the 25th when they became mixed with blood, and caused much pain at each evacuation, he has taken no medicine except a dose of salts on the 25th July 30th Entered Baltimore Infirmary to day; with the following symptoms, tongue slightly coated with a white fur; disagreeable taste in the mouth; pulse 92, tolerably full and strong pain along the transverse and descending colon on pressure stools frequent, thin and and bloody;

no appetite: ordered.

Oleum Ricini ℥ij
Aqua Sassafras ℥ij
Gum Acacia ℥ij
Vin Ipicac ℥ij
Paregoric ℥ss
Aqua Camph ℥iijss

1 tablespoon full every three hours until it produces fecal evacuations. also one cup to the right and left iliac regions.

July 31st tongue heavily coated white, pulse 76 weak; pain in left iliac region, stools thin bloody small and slimy occurring about every two hours, ordered Oil Castor ℥ss, every two hours. difficulty in passing; bladder much distended; ordered to drink flaxseed tea freely and take a warm hip bath.

Aug 1st feels weaker, tongue coated the same, pulse 80; not as weak as yesterday, bowels moved about every 1½ minutes, considerable tenesmus: discharges are thin bloody and watery ordered continue treatment.

Aug 2nd Is worse, tongue much coated pulse so weak: severe pain in abdomen, evacuations bloody, with some tenesmus and straining

℞ Blue Mass grs xij

Pulv Cover. grs xij

Chast ij one every two hours if no fecal evacuations by 5 P. M. Clock give ℥ss of oil mixture every two hours, after one fecal evacuation give ℥ss paregoric.

Aug 3rd Pain in stomach not so severe as yesterday, stools frequent thin and bloody; pulse same, tongue coated: had fecal evacuation this morning. ℞ Tinct Opii gtt XX

Aqua ℥ij

as an enema if dysenteric symptoms return, and if it operates too freely check by Paregoric, continue oil mixture every three or four hours.

Aug 4th Pulse so weak, tongue coated, stools fecalent not much blood, no pain in abdomen, took one dose of oil mixture this morning followed by a dose of the usual chalk mixture

Aug 5th Condition about the same stools frequent slimy and bloody, gave Oil mixture up to 5 P.M. clock, when stools became feculent, stopped oil mixture and gave chalk mixture.

Aug 6th Pulse 64 natural, tongue not so much coated, stools not so frequent, no blood in them, though some straining when at stool.

Aug 7th Pulse 64 natural, tongue but slightly furred, stools diminishing in frequency ordered dose of the Oil mixture.

Aug 8th Rapidly growing better tounge clean, stools fecal; no pain in stomach; all he complains of is weakness; appetite improving

Aug 9th Feels tolerably well; was discharged and ordered to be cautious in reference to diet.

Osteo Sarcoma of the inferior Maxillary bone and its removal by Dr Smith.

William Henry; Colt entered the Baltimore Infirmary Sept 28th Aet 19. Native of Maryland

has always enjoyed good health, his father died
dead does not know of what they died. about
two years since; the left side of the lower jaw
near the symphysis commenced to enlarge, wh
ich has gradually increased, there was no pa
in until about one year after it began to
swell which was of a shooting character.
Upon entering the house, he presented the fo
llowing symptoms; costive, pulse natural;
lower jaw much enlarged the whole length
of the left side, and extending around to the
right; submaxilary glands hard swollen
and painful to the touch; does not complain
of any pain when at rest, but when disturbed
says it aches him, has a slight discharge of
pus from the mouth ordered Alum Rheum
one dose.

Sept 29th Cil operated, the inferior maxilary
was removed by Dr. C. T. Smith; placing
the patient in the following position; seating
him in a chair, a broad band was carried aro-
und his chest and fastened behind the back

of the chair, an assistant supported his head holding it firmly back while a sufficient number held him in a permanent position. The first incision was made on the right side in a direction with the horizontal ramus of the bone, from the anterior edge of the masseter muscle extending about an inch forward; the facial artery was cut and a ligature applied; the bone was then sawn through about ½ an inch anterior to the ascending portion, the left side was operated on in the same manner; when this done two semicircular incisions were made from the anterior ends of the first, to the middle of the lower lip, these penetrating the cavity of the mouth: another incision was carried around the margin of the lower jaw connecting the first, leaving a piece of integument attached to the lower jaw which was dissected; the integument below the margin of the lower jaw was dissected downwards about an inch, to give room to remove the bone and have sufficient covering to

form the floor of the mouth; this done, the muscles were cut from the bone and it removed, after removal finding the disease extending into the ascending ramus of the left side; the muscles were detached from it, the bone disarticulated and removed, the tongue after the removal of the bone, was held by an assistant, the arteries were then taken up of which there were but few consequently there was but hemmorrhage, the parts after the operation were brought in adaptation by bringing the lateral flaps together anteriorly (by a suture) and the lower flap up, some adhesive strips were applied, and the wound dressed with lint, the pulse was good after the operation and the patient seemed no worse from it, upon examening the bone, the disease was found to extend from the left ascending ramus around within one inch from the right angle; the bone on the left side near the Symphisis contained a cavity quite an inch in diameter and filled with pus,

the most of the left side in a more shell glass
Oct 1st Seems to be doing well drinks readily of
sago, chicken soup and milk, pulse when when si
ting up in bed 96 natural in force did not sleep
any during the night, unable to articulate, by
motions can be understood.
Oct 2nd Slept during the night - drinks well pulse
96 tolerably strong.
Oct 3rd Slept some last night pulse 100 full and ha
rd, has not much desire for food complaines of
soreness in the throat and pains in the head,
Oct 4th Condition as yesterday
Oct 5th Dressings removed to day, the wound looks
well, most of it has healed by first intention pulse
90 says he feels very well.
Oct 20th Has had nothing ordered besides the dressin
gs, which were applied once each day since the 5th
inst, consisting of a piece of linen spread with si
mple cerate, the entire wound has nearly closed
does not complain of anything, uses fluid diet
articulates distinct enough to be understood.
Oct 26th Left the house comparatively well; the

wound entirely healed, except two or three small surfaces externally which were rapidly healing by granulations the external orifice of the mouth is irregular triangular in form.
Oct 1st The man has entirely recovered.

Surgical Operation
For a foreign substance lodged in the Larynx.

March 28th 1852; I was called this morning to see a girl aged 8 years, the person who came for me said she was dying, I immediately went to see her and obtained the following history from the parents on last Tuesday the 23rd inst, she with other children was amusing herself by taking a mouth full of corn and blowing it out at the other children, while her mouth was filled she fell backwards, immediately arose coughing violently, which ceased in a short time when she complained of something in her windpipe, with much difficulty of breathing, face flushed and begining to swell thinking

she would be better by the next morning no Physician was sent for.

March 24th slept more during the night, symptoms same as yesterday, but of worse character, the throat very much swollen, great difficulty in swallowing consequently does not eat much, a Physician was sent for who placed a blister over the swollen part of the neck, and gave some medicine internally, he came several times to see her and informed the parents that nothing but an operation would give relief, to which they objected, the child remained in this painful condition until sunday morning when I was called in and found the following symptoms.

March 28th Face neck and upper part of the breast very odematous, and anxious & suffocating expression of the eyes, severe pain in the larynx, where the swelling is greater than at any other part of the neck, much difficulty of breathing, with a constant desire to be carried to the window as does that it may obtain relief, great thirst, but when it drinks & when it cries it has a fit of

coughing I immediately suggested an operation which was rejected but two Physicians were sent for, who consulted and insisted upon an operation, after considerable persuasion got the Parents consent to let me operate, which I did about 1 O Clock in the afternoon, placing the child in a position on its back, across the lap of one of the Physicians; the shoulders resting on the left and its legs on the right thighs, the head was held backwards. I took my position at the head of the child holding the knife in my right hand, I made an incision from below upwards commencing at the upper part of the sternum and carrying it up to the cricoid cartilage separating carefully the sterno Hyoid and sterno Thyroid muscles making all my incisions from below upwards to avoid the dainger of wounding any arteries at the lower part of the neck; after seperating the parts down to the trachea and waiting a proper time for the cessation of the venous hemmorrhage, I placed my knife low down in the trachea, cutting

upwards, twisted fons of the cartilaginous rings. the child experienced instant relief. the wound was held open with blunt hooks, I introduced a probang upwards it being too large I withdrew it, on doing which about ℥ß of green pus found its way out at the opening, indicating that inflamation and suppuration had ben going on within the larynx, I introduced the probang the second time passing it up through the trachea into the mouth after withdrawing it the child seemed to be sinking from the operation, apple brandy being at hand, I gave it some, which soon brought about reaction, about two hours after the operation the child eat some chicken and drank some soup, swallowing with but little difficulty. from the amount of inflamation I supposed to be existing in the larynx I left the wound open that it might breathe with more ease.

March 29th Rested tolerably well last night, the neck has diminished considerably in size, breathes through the opening in the trachea

complaines of soreness were the blister was applied, troubled with occasional spells of coughing a slight discharge of pus through the opening, appetite good eats well, ordered watery solution of Opium to the blistered surface and use mild diet

March 30th The blistered surface not as sore as yesterday, complaines of some soreness in the breast, cough a great deal, bowels constipated ordered ℞ Syrup Cherry Pectoral gtt x every three hours and use Husbands calcined magnesia to keep bowels regular,

March 31st Better to day, is anxious to be up and running about, no discharge from the trachea by the opening, tongue coated with a yellowish fur gave four doses of Calomel gr j each every two hours; stop Opium wash; continue pectoral, placed a strip of adhesive plaster over the upper part of the wound.

April 1st Gradually improving, the wound has closed internally, breathes freely, appetite good complaines of no pain

April 2nd Scarlet rash made its appearance over the limbs, slight fever, does not complain any, ordered to dress the wound with simple cerate.

April 6th Scarlet rash has disappeared continue dressings to neck.

April 12th Saw the child to day well and running about, with but a small cicatrix from the operation.

Aneurism of the Brachial artery and operation.

March 26/1852 I was sent for to take up the Brachial artery, (in a girl aged 8 years) for aneurism, situated in the bend of the arm. On going to the house I saw the child and obtained from her parents the following history about six weeks ago, while the child was labouring under some disease the attending Physician in attempting to bleed from the Basilic vein with a spring lancet while the child was asleep, she made a sudden movement and the lancet accidentally penetrated the artery, I do not know why he did not

cut down and lie the alley at the time of the accident; a compress and bandage was applied, and after considerable difficulty the hemmorrhage was checked, after the removal of the bandage a small prominence presented which gradually increased in size, the Physician with whom the accident happened was one well skilled in the practice of medicine and not to be censured. upon examining the child's arm I found at the bend of it a small tumour about the size of a hickory nut, of which it complaines whenever the arm is flexed, pulsations were distinctly felt and seen in it, the parents thinking the operation a daingerous one placed the child on preparatory treatment for a week previous to my seeing it. I administered Chloroform in this case at the request of the parents, placing the child in a small basket chair, I took a linen handkerchief wet it with the Chloroform, held it a proper distance from the mouth that a sufficient quantity of atmospheric air might be inhaled with it; the child was brought under the

influence kindly without a struggle it was then placed upon a table, an assistant held the left arm the one to be operated on, I made my incision about one inch and a half in length along the inner side of the biceps muscle immediately above the bend of the arm, without difficulty I exposed the artery, placed a ligature above the aneurism and below the anastomotica magna, the child remained under the influence of the Chloroform (which was carried to complete anesthesia) about 10 minutes; the wound was brought together by a suture and adhesive plaster and dressed with lint; about half an hour after the operation, the child had free emesis, which is a frequent result after the use of Chloroform.

March 30th The child has been doing well since the operation, I dressed the arm to day and found the wound almost closed by first intention, ordered it to be dressed once each day with linen spread with simple cerate

April 3rd Called to see the child to day, and found

her affected with Scarlatina which is prevailing as an epidemic in the neighbourhood the wound in the arm has opened, & dressings to be continued. after recovery from Scarlet fever which was mild, the wound healed by granulation, the ligature came away twelve days after the operation and the child entirely recovered.

An
Inaugural Dissertation
on
Epidemic Cholera
Submitted to the Examination
of the
Provost, Regents
and
Faculty of Physic
of the
University of Maryland
for the degree
of
Doctor of Medicine
by
Samuel Phillips
of
Prince Georges County
Md.
1853.

Gentlemen,

In order to comply with the long established rules of this highly esteemed school it becomes my duty, as a student, to submit to your honourable body an essay upon some subject connected with the medical science; the prosecution of which will occupy my strictest attention for the present, and I hope that when it is examined by you due allowance will be made for all imperfections as it has been but a few years since first I commenced a study that demands every moment of a long life for us to comprehend fully. I need some of our brightest stars, whose light guided us through many an unknown course, hesitated not in acknowledging themselves as being comparatively ignorant of the medical profession when in their latter years of life.

Since time is so precious about this time and knowing that it will be tedious

for any one to peruse this when others, written by men of the best information and intellect, can be procured, I will endeavour to be as brief as propriety will allow.

The disease that will engage your attention for a short time will be the one known by the laity as Cholera. Many epithets have been given to it; some deriving their titles from the countries, which appeared first to have given it birth; others from the most distressing symptoms attending the malady. Asiatic cholera, India cholera, Spasmodic cholera, and Malignant cholera are the appellations given to the affection. Of all the name epidemic cholera, I think, is the most appropriate and is now in general use: it is however not without objections since the disease is becoming endemic to our country; besides the Sporadic form sometimes rages as an epidemic disorder. I will not, however, dwell upon names in this commentary, since they constitute but little, if any virtue besides being, as it is said by many, and truly too, the

cause of a great deal of injury, inflicted upon patients by prescribing for a disease according to its name and not its symptoms. If the greater number of the disorders to which our feeble frames are subjected had not titles it would add not only a vast deal to the success of Therapeutics but also to the comfort of mankind. Study well the symptoms and let the name take care of itself, is a maxim that ought to be observed by every student

Let us for a moment direct our attention to a spot in some distant land where according to the opinion of our ancestors this direful malady first commenced its ravages and with a glance observe the course of its march through different parts of the globe.

The exact date of its occurrence is not known. It might have existed before the time of Hippocrates, the father of Medicine - yea it might have been the same monster related in the Scriptures as depopulating vast extent of country and slaying large armies in a

single day. India, from whence one of its names appears to be that spot that gave birth to the sightly dreaded disease, where it remained, until the year 1817, in a state of comparative inaction as if preparing itself for that devastation, which most of the inhabitants of that country had the horror of witnessing. About this time it began to attract the attention of the medical profession.

The above named country having suffered by its unmerciful sting, it extended itself with much terror over the neighbouring countries and after slaying thousands of human beings became in a state of repose for a number of years, appearing like an army recruiting her forces. Asia having now been secured by it, next it is seen to present itself in Europe about the year 1830. The larger cities of that country were visited in quick succession and, likewise, with like mortality. England, being frightened at its ravages and fully anticipating an attack, dispatched physicians to Russia, where its mortality was greatest, to inves-

-gate its ration and ~~encamm~~ to moderate its strong if not stop its progress; they, however, though possessed of that energy which marks the course of most of the members of the profession, were foiled in their attempt: and consequently it inevitably land with apparently increased zeal and threw a great number of her population into their untimely graves. Thus in the short space of fourteen years it traversed nearly the whole of the old world.

The great Atlantic offered no barrier to the monster, but America, the land of the free, was not to be seen enshrined in one badge of mourning; before presenting the appearance of perfect felicity, was then naught but lamentation. The habitations of the dead, before nearly desolate, were then compelled to be enlarged: so great were the applications for admission. Prayers were sent to Heaven for our delivery by the ministry but with no effect: fate was against us. On the 24th of June 1832, the day of its appearance in the United States, it was in New York and so long that city appeared as

if forsaken by all except those whose business it was to see the dead borne to their final abode, then neither trouble nor disease frequents.

From New York it traveled in two divisions; one pursued a course along the shores of the lakes, down the valley of the Mississippi to its mouth, and in its progress to visit every city with its usual degree of destruction; during this time the other division was making its ravages along the banks of the Hudson and shore of the Atlantic; and after passing along the Gulf of Mexico united with the former division and embarked for the West Indies, where it committed even greater ravages than in our country.

Thus we see in the short space of one year it visited not only our large cities but also many villages and private habitations with little moderation in comparison to its ravages in Europe.

The disease continued to show itself in isolated spots, never more than once in a place, until some time in the year 1834, when we were able again to return thanks to God for freeing our land

of a disease that was deadlier for men than the mighty armies of our mother country. Europe and other countries, India excepted, became alike exempt from it; the latter country, being as we have seen the place of its birth, is now also its abode.

In the year 1847 it again was heard to be on the increase in its native land and, as we anticipated, again it began to pursue its once trodden path from one country to another until it arrived upon this land in the summer of 1849 but its deadly venom was greatly moderated. And since it still continues with us the question arises "will it again return to India or become an enemic disease here as well as in the latter country"?

Having traced the disease from its place of maturity to almost all parts of the world, it will readily appear that no barrier, either artificial or natural, was able to impede it in its progress. Neither the cold of a Russian winter nor the Equatorial heat was able to arrest it; however Winter seemed not only to shorten its stay in any one spot but also lessen its mortality to a degree.

Its favourite seat was evidently through the temperate zones. Like most other dreaded diseases it prefers the hut to the palace; the suffocating atmosphere of low marshy lands to that which frequents the lofty mountains of our land; and the dense populated city to the country cottage. But it might be asked did it visit, at all, the rich house, the village, or the mountain top? The answer can be given in the affirmative. No class of persons was exempt entirely from its attack. The duration of its stay in any one place was one or two months seldom over three.

The symptoms will be described accordingly as they present themselves in the different stages; which may be divided into that of premonition, of characteristic, of collapse, and of reaction.

When called to a patient complaining of diarrhoea, a feeling of uneasiness in the abdomen, languor, slight pains in the head, and cramps in the extremities; if he has furred tongue, impaired appetite, moderate excretion of the skin at times, nausea and sometimes vomiting, one

might venture to assert that such a patient had the symptoms that mark the course of the first stage of Cholera, called Choleriné by the French: and the opinion will be confirmed if the disease already exist in the place of the patient's abode. If this stage be attended to with promptness it may readily be arrested but if neglected the second stage will inevitably supervene.

Besides the above symptoms others far more grave present and are considered characteristic of this stage; hence its name. Copious vomiting and purging now rouse the patient from his slumbers and warn him of his fast approaching dainger. The discharges consist of a peculiar looking fluid somewhat like thin gruel or rice water, which when allowed to remain in the vessel for a short time a white flocculent and insoluble matter is seen to settle to the bottom. They generally occur without much exertion on the part of the patient: they are sometimes so great as to induce the patient to believe that

the whole contents of the alimentary canal were discharged: but in a short time others equally as copious are ready to be ejected. Cramps, if not present in the first stage, now become the cause of general complaint; often attaining such a degree of severity as to cause the most firm hearted man to cry aloud. They appear first in the calves of the legs, then in the upper extremities, and lastly in the trunk. They are often so great as to make the part feel like wood or other hard bodies and to cause the fingers and toes to be bent in various directions according as the muscles affected.

After the above symptoms have run on for an invariable length of time others of a more formidable character, though less painful, present themselves. The pulse becomes small, frequent, weak, and sometimes imperceptible at the wrist for hours before the vital spark is ready to depart; the respiration becomes either frequent and feeble or slow and oppressive; the surface not only cold but bathed

in a copious perspiration, and its colour has, now that blue cast so characteristic of the disease; the lips are of a livid hue, due not only to the imperfect aeration of the blood but also to the absence of its watery constituents; the countenance possesses that peculiar aspect, termed Hippocratica description of which I deem unnecessary; indeed every symptom indicative of disordered circulation is present. The urinary organs, as one might suppose, are nearly always inactive; patients going often for days without having a single discharge. The breath is sometimes so much below its natural temperature that if a thermometer be placed beneath the tongue it will stand at 95° or lower. The washerwomans hands can be seen at this time together with the blue finger nails. The separated calls for cold drinks and the complaining of burning up are marked symptoms at this time, owing doubtless to the congestion of the internal organs and the entire

ual draining kept upon the intestins. But one of the most marked symptoms is that degree of mental activity possessed by a great majority of patients: a patient is sometimes able to give proper directions about his worldly affairs being at the same time perfectly indifferent about his fate; Often when life appears at its lowest point but one link connects it to this earth - the eye, the most perfect organ that we possess, still retains its peculiar brightness. The above is as perfect a description of the third stage, or that of collapse, as my memory can afford. This is the division in which a great majority of those affected with the disease perish.

Should the patient still resist the deadly poison still longer, he, in general, begins to present a rather more favourable aspect for recovery denoted by the subsidence of the cramps; the reappearance of bile in the discharges, which also become lessened; by a gentle warmth

and diffused redness appearing over the surface-that cold and damp feel, so characteristic of the 3rd stage, disappearing; by the kidneys, which for a long time had been dormant, being able to renew their office of secretion; and, lastly, by the pulse and respiration returning gradually to their normal strength and quickness. The above is the most favourable termination of the stage of Collapse and as you are aware seldom occur, on the contrary, far more serious symptoms generally present themselves denoting local lesions in some important organ or organs - such as inflammation of the brain, thoracic organs, or the abdominal viscera. Often after a temporary excitement the patient sinks into a low state, somewhat like Typhoid, though different in the absence of that peculiar local lesion, that characterizes the latter complaint from all others, of which, I dare say, you will hear enough from other sources. Some might be desirous of knowing whether or not all the symptoms above numerated occur in every case of Cholera.

It is occasionally ushered in by complete collapse without even the premonitory symptoms. Sometimes the vomiting and purging are absent at other times the cramps, if not entirely absent, are very slight as to escape the attention of the physician. When purging was absent in any case the bowels, after death were, nevertheless, found greatly distended with the rice coloured fluid. The blue skin, so peculiar to the disease, is often wanting. The stage of reaction sometimes begins from the commencement. The termination of fatal cases may be looked for from the second to the twelth hour; not that I would infer that it never exceeds that time: far from it. It is said that sometimes the prostration is so great and the pulsation over the cardiac region so feeble, that the exact period of the failure of the vital fluid could not be recognized by the most minute observer:— hence instances related about the dead bodies returning to life while in the grave &c: as to their veracity I will not decide.

Having briefly noticed the symptoms as they presented themselves it behoves me now to investigate, as minutely as your patience will allow, the causes of this fearful disease. Poverty, by which term I mean a deprivation of most of the necessaries of life, deserves to be mentioned under this head not only in this affection but in every other to which man is liable, except Gout, which is truly a rich man's disease. Intemperance not only in drinking but also in eating comes next; and lastly animal effluvia. The above three may be termed the first and last of the predisposing causes: their combined effects are seen standing forth in boldness in every large city; from their effects we can readily account for the greater mortality in Asia compared with Europe, and the latter country compared with ours: and the poor & down trodden part of one nation compared with the higher class. Other causes too numerous to be mentioned may also have some influence

in calling the disease into action; but I will merely say that any thing that has a tendency to depress the vital energies will acts as a predisposing cause. The exciting causes are no less numerous: the first of these is the sudden reduction of the temperature of the body after being heated - an error so often committed by persons in taking copious draughts of iced cold water; errors in diet is also a very frequent cause, especially in the summer seasons when abundance of rich fruit abounds; grief, change of fortune, watchfulness, and grief alike claim a place here; indeed, any thing that irritates the already much weakened organ - the stomach, or is capable of rousing the nervous system into inordinate action. Since the above two divisions of causes are not capable of producing the disease, it become necessary to look farther for that substance, or matter, animal, or whatever it may be, that is the sole agency in propagating the disease; free the world of it and we will no longer be troubled with so deadly a malady.

As to the essential nature of such a cause numerous hypotheses have been advanced but none has been able to withstand the scrutinies of the profession. From the best analyses no substance, sufficient to produce such deadly effects upon the human system, could be detected in the cholera air. That terrestial effluvia is not the essential poison is evident from the mere fact of its prevalence in Russia during one of their coldest winters, besides its occurrence in the great deserts of the East; throwing aside the fact of the low, and damp regions of some parts of Africa being opposed to its welfare. From a knowledge of the progress of the disease - sometimes proceeding sometimes with much rapidity, and then haulting for a time, sometimes making excursions in some spot not supposed to be favourable to its action, &c - some has been induced to believe the cause to be invisible animalcules; but the fact of unprotected animal life being unable to exist in a Russian winter is enough to convince the profession that such is not the case.

The doctrine advanced and supported by Dr Cowdell on the ground of its specific influence being analogous, in its movement, to that of Influ-enza, is I think the most plausible of all that has been given. He believes that the disease had its origin from atmospheric fungi. As we know there must exist a specific cause, though invis-ible to either the human eye alone or assisted by an artificial one; the next question arises how is the disease propagated? That it is not contagious, I believe, most of the members of the medical profession have agreed from the following strong facts; "that the affection after having rayed with awful rapidity over countries, halted on the confines of other countries without its spreading in the interior though opened to a constant intercourse; by it having leaped over countries to attack others; by the fact that physicians and attendants were no more liable to it than any other class; by persons already affected with the disease going into healthy regions were not able to propagate it to others; by the strictness quarantine watch not being able,

to account for its appearance in cities; and lastly, by the strictest observances of hospital physicians not being able to detect its propagation from the sick to the well. Numerous other strong proofs could be offered but as it is believed by nearly all I deem it unnecessary to mention any more.

As the nature of the disease still remains unknown I will pass over it in silence and notice next the anatomical characters.

Post mortem examinations will present different appearances according to the stage in which death occurs. If in the stage of collapse one would from a priori reasoning be apt to the alimentary canal for the principal pathological lesions but he will as often be foiled in his investigations. In the greater number of fatal cases naught is found but an increased developement of the glands and mucous membrane; a coating of a whitish or grayish matter lining some parts of the canal, consisting probably of epithelium not yet cast off with the evacuations, which coats probably,

renewed often in the disease; and sometimes an eruption of minute semi-transparent vesicles is an first noticed, I believe, by Dr. W. E. Horner and considered by him to consist of an elevation of the epithelium by serous fluid. The arterial system is generally found entirely empty with the exception of a few imperfect clots now and then found in the larger trunks; the venous system on the contrary is seldom found in any other state but congestion. From a knowledge of the watery discharges one would expect to find the blood of a dark and grumous consistence; the proportions of its salty constituents is mostly diminished: but urea is, I believe, always increased in quantity; hence the suspended function of the kidneys. The serous membrane is found dry and covered with a viscid matter. The lungs and nervous system are generally exempt from the disease. The gall-bladder is mostly distended with bile.
A remarkable fact noticed after death from this disease is the increase of the temperature of the surface, due probably to the return of blood

from the internal congested organs: hence we are able to account for the unusually long time that intervenes before the coming on of the cadaveric rigidity.

Another phenomena noticed by many is the muscular contractions, which are often so intense, as to cause distinct movements of the extremities; sometimes only muscular twitchings are observed, which are due to the relaxations of the bundles of contracted muscular fibres. Should death not occur until reaction has taken place, inflammation is generally found in the alimentary canal; and the glands show signs of incipient ulceration. Lesions in other parts of the body, such as the brain, lungs &c., as might be infered from the symptoms previous to death.

The only disease that can possibly be mistaken for the one under consideration is that termed sporadic cholera, or Cholera morbus. The two, Phlegm, are considered by a few as due to the same cause though acting with different degrees of intensity; such an assertion needs no consideration. That one disease occurs in Summer or Autumn

while the other has no particular respect for stools; the absence of bile in the discharges in one and its presence in the other; and, lastly, the sudden onset of Cholera Morbus, while the Epidemic form is generally ushered in by certain premonitory symptoms, are sufficient diagnostics of the two diseases. The blue skin in Cholera is also a good distinguishing symptom.

We come next to notice the prognosis which of course will be governed according to existing circumstances. Should the disease be combatted in the first stage we can mostly foretell a favourable termination: this unfortunately is seldom the case since persons are so apt to consider a slight diarrhoea as directed by nature to free the system of some morbid matter and therefore assist her by administering a cathartic which, instead of relieving the patient, throws him in the stage of collapse from which all the remediable aid, that medicine can afford for his rescue, proves to be of little effect.

From what I have said under the head of the

history of the disease it will become evident that low, damp, and ill ventilated parts of cities are very unfavorable circumstances that attend it. Patients crowded together in rooms afford but little hope of recovery. Since the fearful havoc among the poor, who are generally the inhabitants of such parts: and the inmates of Hospitals, and encampments and garrisons. The time of an attack will also govern us to a great extent: the mortality being fearfully great in the begining of an attack and gradually decreasing as it is about to abandon a place. In many instances after the third stage has fairly commenced one can seldom err in giving an ill prognosis; though, I think, in all cases powerful remedies should be given in order to prevent the termination of life if possible. Excuse me for not giving the statistics of deaths and recoveries in the various Hospitals of Europe and this country; I will merely add that the mortality was much greatest in the former country. Since the prognosis of this disorder was more favourable in its last visit I hope it will ere long give us less cause to dread it.

Reaction is far from indicating a safe recovery for how often do we see patients, whose systems have been reduced beyond the point for rallying, ultimately perish from inflammation of some important organ.
As to the treatment little can be said. Numerous cures have been advanced but none have been able to withstand their reputation. But in few diseases is the assistance of the profession more called for by Nature than in the begining of this disease.- when the characteristic symptoms have not set in; and in none is it of so little avail should the disorder be permitted to go beyond that period. During the prevalence of an epidemic of Cholera, diarrhoea is always a troublesome symptom not only in this but in other disorders; and it was not until the ferocious malady had extended itself over the whole land, that practitioners discover that they could often cut short the disease by simply attacking this premonitory stage by some

mild preparation of some of the astringents opiates and aromatics; and perchance a few grains of Calomel may be called for should the liver be in disorderly action. By a knowledge of this fact can we not attribute the comparative mildness of its second visit to this country? But when the disease presents these symptoms which are so characteristic of the disorder, nothing yet is known in the Materia Medica by which we can, with certainty, restore the patient to health. Are we to give up in despair and let the disease run on until death closes the fatal scene? Are we to try new remedies or to increase the quantity of those that appear to do a little good? Let us ever remember the maxim of our illustrious ancestors "as long as there is life there is hope." We have seen that the mucous membrane of the alimentary canal is the principal seat of the affection; being in a state of violent irritation and upon this fact, I believe, the whole cause of all other phenomena:

Directly the discharges from said parts have ceased the liver returns to its normal action, then intolerant spasms, so seldom absent, begin to abate, and the kidneys again secrete their accustomed fluid; in fine all the symptoms of collapse begin to disappear. To stop the irritation and discharges of the mucous membrane of the bowels should then be our paramount object and to which experience has taught us to resort to those favourite remedies so often resorted to in Cholera infantum: I mean acetate of lead, and opium. They should be given in large quantities until the discharges are arrested: the best advised plan of giving them is in pill, composed of a grain or a grain and a half of Pb. A. with the twelfth or eighth of a grain of opium, given every one, two, or three hours. Would it not answer better in solution as the absorbing powers of the membrane are much enfeebled? However, I suppose the discharges are sufficient to dissolve it in a short time? Should the pill not be borne, small doses of the acetate of

of morphia may be substituted for the opium: by
adding thereto strong solutions with the tincture of opium
should also be exhibited. Ice in small quantities
frequently repeated should be given to mitigate
the excessive thirst. Dry friction to the surface,
is the best thing to produce action in the cuta-
neous system. The above plan of treat-
ment will, I believe, do all that can be done;
others are also in use, some of which I
will now mention but cannot say much in
their favour. Some practitioners being
impressed with the belief that the absence
of bile is the essential cause of death not
only advanced but now strongly support
the treatment by calomel alone; and it
is somewhat astonishing that they did not
add some diuretic to the mercurial plan since
the urinary organs are as much impeded
in performing their office as the liver. We
would be no more justifiable for treating de-
rangement of the liver in this disease as
the true cause than would we be in treating

arrangement of the nervous system due to some irritating matter taken into the stomach and producing morbid action. I would not have you too believe that I am in favour of the entire exemption of calomel in the disorder, on the contrary, I think it of much value when the mucous membrane have been restored to such a state that absorption may be established – it is from the loss of this function that those large doses of calomel so often given can be borne with impunity. Soon after it was known that the blood in this malady lost the greater portion of its salts and serum, some advanced the plan of giving copious draughts of solutions of the non-purgative salts and the injection of such solutions into the veins: patients under these plans often became markedly better but unfortunately it was of short duration. Might not the injection of the veins be of much lasting benefit when, after the discharges have been allayed, the system is too prostrated to recover its healthy action?

bleeding in all stages has been practised by some; while emetics and purgatives have been strenuously advocated by others. Other plans, too numerous and of too little importance to be mentioned, have had their supporters. One might readily infer, after looking over the various and opposite plans of treating Cholera, that Quackery had got a prominent place in the medical profession.

When reaction occur the treatment should be governed according to the circumstances of the case. Inflammation can seldom be stopped by bleeding since the system is too debilitated; cupes, fomentations, the mercurial impression, blisters, and a regulated regimen, are compelled to be employed.

Strict attention to the diet should be observed not only during the course of the disease but for some time after convalescence since often months and even years may elapse before a patient is entirely well. What particular articles of food that should be used, must

be decided by the practitioner.

By a strict attention to the diet, never over loading the stomach, avoiding all indigestible vegetables; by observing a regular course as to eating and drinking; by not exposing to over fatigue, sensual indulgences, inclement weather we may often ward off the disease.

Before ending this meagre essay I am compelled to return my humble thanks for the innumerable benefits that I have received from your arduous labours and hope that you may live a good old age not only for the pleasures of this world but also for the good of mankind.

An

Inaugural Dissertation

on the

Symptoms, cause & Treatment,

of

Intermittent Fever:

Submitted to the examination

of

The Trustees, Regents & Faculty of Physic

of the

University of Maryland

for the degree

of

Doctor of Medicine.

by

John S. Lynch

1853.

Intermittent fever is probably one of the first diseases from which the human family suffered; for at the very earliest period of the three young worlds history, the same causes existed which are supposed to give rise to it now. As Theology & History concur in placing the delightful garden in which man was originated within the limits inhabited by disease, it is not improbable that our parent father of mankind found this among the first punishments that accrued upon his disobedience. The first of medical writings contain an account of it; & as it has inflicted much suffering, it has naturally occupied much of the attention & investigation of the profession. It will hardly be expected therefore that I shall advance any new ideas on the subject that are not extravagant or improbable, since the greatest minds have already thoroughly examined ~~the subject~~ it under circumstances the most favourable for the elimination of truth. Indeed I shall not attempt it; but shall content myself with collating such facts & ideas from the writings of others as to me seem most probable, & now in a occasion honestly to acknowledge my indebtedness. A long residence however in the midst

of the disease, & a list so familiar acquaintance with it, enables me to advance ideas which although not peculiarly my own I am yet indebted for only to a [illegible]

The division intermittent fever into [illegible]

phenomena of Ague as so many repetitions of a [illegible] The whole period during which they continue to [illegible] their intervals, is here comprised [illegible] The use of cinchona is such high authority, I think that no such liberty can be [illegible] if it is so, there would be no reason why the disease should not always return when one of its paroxysms has been suspended yet we know that in [illegible] A majority of cases, if we succeed in stopping one of these although by means that are not positively [illegible] the system at large, it does not return, until some exciting cause [illegible] again give rise to it, and then it always recurs precisely the same [illegible] Again, if such paroxysms be a distinct disease, it should [illegible] the intermittent disease to recur soon as the patient is removed from the influence of the cause which

produced them, yet in [illegible] although moved to the most healthy situations, & sedulously guarded from all the ordinary exciting causes of disease. Intermittent fevers often resist every [illegible] paths of Tonic medication.

I would then define Intermittent Fever to be a disease consisting of a succession of febrile attacks, occurring at regular intervals, each running a definite course, & followed by distinct intermissions.

Each of these attacks, from their course symptoms so different as to lead to their [illegible] into stages. These are thus named from the most prominent symptoms attending each the Cold, the Hot, & Sweating, & they occur in the order named.

The cold stage is sometimes established at once, sometimes preceded by a feeling of lassitude & general debility, pains in the back & soreness of the lower limbs, headache & sometimes a sense of oppression at the epigastrium, more rarely with nausea & vomiting. These symptoms continue for a certain length of time varying from a few minutes to half an hour & then slight chilly sensations begin to be experienced in the back, first creeping along the spine, or darting as it were in volleys over the upper dorsal region.

At the same time the patient is frequently sighing, yawning & stretching. The coldness gradually diffuses itself over the whole surface. The nails turn blue; the ends of the fingers, the nose, & tips of the ears become icy cold, & the lips also lose their natural colour. The skin becomes rough from its contraction around the hairs on the surface, the countenance becomes pale & shrunken, & measurement will often show an actual diminution of the whole volume of the body. The patient [illegible]; the teeth chatter - it [illegible] with sufficient force to [illegible] [illegible] [illegible] [illegible] [illegible] without [illegible] [illegible] [illegible] able sensations. The pulse in the mean time, becomes [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] siderably firm. The breathing is hurried, anxious & oppressed, and frequently attended with a short dry cough, a sense of constriction or weight about the chest. There is often with these symptoms ~~[illegible]~~ great dejection & some confusion of the mind; at other times even delirium. Nausea & vomiting also frequently complicate the suffering of the unfortunate victim. The ejections consist at first of the contents of the stomach; sometimes of bile

& often of a thin transparent copy fluid. The urine is [illegible]
[illegible] color [illegible]

The [illegible] half an hour to five or six hours & the symptoms begin to abate. The coldness of the surface gradually gives place to a feeling of warmth, or convenient flushes of heat pass over the body, [illegible] agreeable character; so much so that I once heard a [illegible] man say that he was almost reconciled to the pain by the delightful sensations he enjoyed on their subsidence. The cold fits now pass entirely disappear & reaction is fully established. Those parts however that first become cold, that is the ears, nose, & extremities, lack in the last to yield to this reaction. An almost entirely different set of symptoms now present. The pulse which was weak, quick & frequent now becomes full, strong, & bounding. The surface hitherto cold, & bathed often in clammy perspiration, is now hot, (often intensely so) and dry; and the skin recovers its natural fullness & smoothness. The respiration becomes more regular but still more hurried than natural; Headache, pain in the back becomes more severe; thirst more urgent; the mouth becomes dry and clammy & the tongue

coated with fur; the tongue becomes scanty & highly colored or entirely suppressed; delirium frequently occurs in severe cases; and in some children. This stage is often ushered in with convulsions. This stage may last from one to seven or eight hours & then still another stage takes place.

The skin which was hitherto dry & harsh begins to assume its natural softness; a moisture appears first on the forehead & face & gradually diffuses itself over the neck & chest & finally the whole body becomes bathed in profuse perspiration. The effects of this upon the feelings & the patient are most extraordinary; the pains leave him; thirst ceases; respiration becomes full & regular; the pulse regains its natural frequency & force; the urine again becomes plentiful, but turbid, & deposits a lateritious sediment resembling brick dust. After a while the sweating ceases, & the patient often awakening from a sound sleep into which he has fallen on the subsidence of the hot stage finds himself quite well; goes about his usual avocations; & eats with an excellent appetite the meal which the paroxysm had for the time robbed him of. He is not always however, so fortunate; for sometimes although there may be a complete apyrexia, his appetite does

not return; his tongue is still coated; and he is aware of certain uncomfortable sensations, & on examining the pulse it will be found to be rather fuller & more frequent than natural.

It will not be supposed that every case presents exactly the characteristics here ascribed to it; as there is great variation both in intensity & duration in different cases, & sometimes in the same case. Thus the cold stage may be sufficiently severe to destroy life before any reaction is established, when it is said to be malignant or pernicious; or, it may amount only to a slight feeling of chilliness without any distinct rigors, & then it is said to be a "dumb ague". Again there may be a difference in the usual order of the symptoms. Sometimes it is said there may be a fever distinctly intermittent, yet the cold stage is wanting; and on the other hand the cold stage may be present, & pass directly into the sweating without there being any perceptible duration of the heat; and Dr Eberly says he has seen several cases in which the natural order of the symptoms were reversed.

The time which intervenes between the end of one paroxysm & the beginning of the next is called an intermission; while that which elapses between the beginning of one & that of the succeeding one is called an Interval. The length of the Intermis-

since therefore will depend upon the duration of the paroxysm, the interval, and the type of the disease. If (the interval) may be 24 hours, & then the disease is said to be quotidian; if 48 hours it is a tertian; if 72 it is a quartan. This is perhaps far enough to carry the division, though we read of Quintans, Septans & even of agues that recur on every eighth day. They are very rare, but we see no reason to doubt their existence; for if we can conceive the existence of any cause which is capable of producing certain manifestations of disease on every fourth day, (which almost every one has seen) it may be equally capable of producing it on every sixth, seventh or even on every tenth day. Pliny the naturalist tells of a man who had an attack of this disease once every year on his birth day. This was probably accidental, or depended upon the jollification in which he indulged on the annual return of that important day; at all events it can hardly be admitted as a distinct type of the disease. Besides these divisions, authors speak of double Quotidians in which there is two paroxysms every day; the double tertian, where there is a paroxysm every day, but they recur at different hours; or, perhaps some other points of difference sufficiently clear to distinguish them from each other; and the

double quartan — there is a paroxysm on the first & second day, one day of intermission, & one again on the 4th & 5th. & that of the fourth corresponds with the first & the 5th with the second. Sometimes there are two paroxysms on the first & third days, & none on the second, & the disease is called a redupliated Tertian, or there may be two paroxysms on one day with two days of intermission as in the redupliated quartan. There is yet another vagary sometimes observed, in which there is a paroxysm every day, but that of the fourth day corresponds with the first, the fifth with the second, the sixth with the third & so on. The only one of these eccentric varieties I have ever witnessed is the double Tertian; — they are all of exceeding rare occurrence & when recognized scarcely require any modification of the usual treatment.

In my own experience the quotidian occurs most frequently of all these varieties; but the most writers think the Tertian is most frequent type. All agree in pronouncing the quartan the most difficult to cure, and the country people have a saying that any thing which is very annoying or difficult to get rid of is "worse than the third day ague & fever!!" this third day ague with them corresponding with the quartan

of the [illegible] & by the [illegible] such [illegible] to be accordingly the best nomenclature of the three.

Each of these three principal varieties have characteristics peculiar to themselves. For instance, the quotidian is said most usually to occur in the morning; the Tertian at noon & the Quartan in the evening; and some have laid such stress upon this as to say that in the first paroxysm they can foretell the type it will assume by merely noticing this circumstance. However this may be in the main, there are certainly some exceptions to it; for I once suffered from an Intermittent distinctly quotidian in which the paroxysm recurred every day almost precisely at one o'clock. Indeed it can hardly be expected that a disease so irregular in other respects should rigidly a rule like this.

They also differ in the length of their paroxysms, & duration of their respective stages. The quotidian has the longest paroxysm & the shortest cold stage; the quartan has the shortest paroxysm & the longest cold stage; the tertian is intermediate between the two. It will hence appear that the length of the paroxysm varies inversely as the length of the interval; and the ~~length~~ duration of the cold stage inversely as the length

of the paroxysms. Some persons seem to have a peculiar susceptibility to a particular type of the disease; and never have any other form of it than that which first attacks them; and it has seemed to me that in most cases the same types are apt to be repeated in all subsequent attacks upon the same individual. I have had [illegible] intermittent fever some eight or ten times, & always of the quotidian type; and I well remember a schoolmate of mine who used to have the disease every fall nearly, and he always had the Tertian variety. I have seen a few other cases which illustrate the same fact, but perhaps, there are not yet sufficient facts to put the question beyond doubt.

Intermittent fever occurs most frequently in the autumn, from the 1st of September until December & in the spring. They are far more frequent however in the former seasons, and much more severe & more intractable. Vernal intermittents when uncomplicated are usually mild & easily cured. I add a opinion prevails among the vulgar that they are salutary; and there is a saying among them that "an ague in the spring is physic for a king" It is needless to say that there is as little truth ~~or fact~~ in this, as there usually is in popular sayings on subjects about which they are ignorant. Writers have divided Intermittents into many

kinds, according to the complications it presents, or the particular set of symptoms which may predominate. The simple, the inflammatory, the [illegible] the [illegible], the congestive, & the malignant or pernicious have all been described, but I think that the simple, inflammatory & malignant constitute a division which while it is simple, is yet comprehensive enough to embrace all the cases; the Gastric & Bilious fevers depend upon inflammation, congestion or irritation, of the Stomach, Liver or Duodenum; and the congestive may be appropriately referred to the malignant, for any considerable amount of internal congestion, especially of the larger vascular [illegible] would give rise to symptoms which would certainly deserve the appellation of malignant or pernicious.

In the simple variety, the symptoms are usually mild, of short duration, with intermission complete; in which the patient is nearly in a state of ~~complete~~ perfect health. Indeed it is often astonishing how long the functions will maintain their integrity under this form of fever.

The inflammatory is characterized ~~by a~~ generally by strong rigors in the outset, full bounding pulse, hot skin, flushed face, [illegible] hot stage, & frequently attended with delirium. If the stomach

is the seat of inflammation, there will be pain in that organ attended with nausea & vomiting; if the liver, it will be indicated by derangement of the functions of this gland sometimes attended with cough, with bilious vomiting, pain in the right side or with jaundice; if the duodenum, there will be added the symptoms of disease in that part of the alimentary canal; if the small intestines, diarrhoea; and if the inflammation is seated in the large intestine, the symptoms will be dysenteric. In the intermission the pulse does not regain its natural frequency or force; & is quicker & harder than natural; anorexia continues, thirst is but little altered, & the tongue does not clean as is usual in the mild variety. It is probable that a complete apyrexia hardly ever occurs.

The malignant variety is characterized by unusual severity & duration of the cold stage, followed by feeble & imperfect reaction, nausea with excessive vomiting frequently of blood & diarrhoea consisting also at times of bloody dejections. The surface is icy cold & often covered with perspiration which it is said gives it on applying the hand the feeling of wet marble; yet while there is this coldness of the surface, the patient often complains of burning heat, begs for cold drinks & sometimes ex

presses a wish to be thrown into a river or placed under a stream of ice cold water; he gradually sinks, falls into stupor or becomes comatose, or apoplexy puts a more sudden termination to his sufferings. The recurrence of this last is most certainly fatal. [illegible] [illegible] effectual attempts a feeble reaction is at last established and this is followed in a short time by a most exhausting perspiration [illegible] [illegible] a condition [illegible] [illegible] oxysm. The fever is hardly ever of a high grade, but is even in the very first attack adynamic. The perspiration is sometimes followed by an intermission so slight as frequently to elude the attention of the physician who may be foolish enough to wait for it; but I have reason to believe that in many cases there is no remission at all, but another cold stage sets in immediately on the [illegible] of the previous paroxysm. Thus these cases cannot correctly be called Intermittent, since there is no intermission, but it is usually described under this head; there is the same objection to classing it among remittents. The patient very rarely survives the third paroxysm; indeed I have [illegible] [illegible] [illegible] much experience in the treatment of these

[illegible] I had never seen a case in which they surrounded the blood, [illegible] and did they seem to possible for any constitution to withstand such furious onslaughts.

[illegible] other affections. Some of these are produced by the fever itself, others are concurrent or depend upon the same cause that gives rise to the fever. Dysentery, Cholera, jaundice & visceral inflammations are [illegible] Vernal intermittents is said to be most frequently inflammatory; autumnal often accompanied with disorders of the alimentary canal. I have never seen any difference in this respect. Autumnal Intermittents being as often inflammatory as the vernal.

Intermittents have been said, at times to be salutary, by preserving its victims from other & more dangerous maladies: besides which it ~~has~~ is said to have cured other diseases. I know not what more dangerous malady it may have preserved them from but I know that when suffered to continue long it is by no means destitute of danger; and [illegible] suffering. I had rather have a short attack of almost any acute disease than to have this most annoying affection for days & weeks.

The disease which it has acquired the greatest reputation for cu-

ring, is Epilepsy. Rheumatism, Hysteria, [illegible] cutaneous, Asthma & hemorrhoids are also said to have disappeared on the accession of an intermittent. If there is any thing more than a mere accidental connection between them, it is probably because the original affections depend upon the same cause which produces ague; and they yield upon the contraction of a severer form of the same disease, as syphilis was formerly supposed to be cured by mercury; but [illegible] it [illegible] involves a result to the Homoeopathic principle "Similia similibus curantur". [illegible] is often epileptic [illegible] of other complaints. It seems to be [illegible] the highest prince for doubt. [illegible] these cases only that ague has a reputation for curing. In all probability they would yield to the indication [illegible] the ague treatment as [illegible] neuralgia, Sciatica, hemicrania, Toothache, cramp in the stomach, Dysentery, Cholera, Asthma, Hiccough, Mania & it is said spasmodic strictures [illegible] simulate intermittent in being strictly periodical, & seem apparently from the same cause, these are called masked agues or intermittents, & acknowledge the same treatment applicable to that disease

In the simple uncomplicated Intermittents of this climate, the prognosis, as far as regards its ultimate termination, is favourable. Its duration however is exceedingly various & depends of course upon the treatment to which it is subjected, & the continuance or not of exposure to its exciting & predisposing causes. Before the discovery of the great anti-periodic Cinchona, it was regarded as an exceedingly obstinate & intractable disease; and Hippocrates as well as many since his day, held that the best remedy for an autumnal Intermittent was the warm sunshine of the following spring. Now however no one need generally suffer longer than a week from this complaint, if he is within the reach of Medicine. In hot latitudes however it is a very dangerous disease, as we can see how soon an apparently simple Intermittent may be converted into a malignant one; since that form of the disease not unfrequently commences mildly & after a few paroxysms suddenly developes so much energy as to destroy life in a very short time.

When death occurs in the simple variety it does so from some one of its complications. Deaths usually occurs in the cold stage & most generally from excessive depression;

congestion of the vessels of the brain, giving rise to symptoms resembling apoplexy; sometimes from effusion into the ventricles or between the membranes. The occurrence of coma-pleny in this disease is almost necessarily fatal. If the patient survives the cold stage he is generally out of danger during the comatose or until the occurrence of the next.

The prognosis is also affected by the previous health, constitution, & habits of the patient. Persons of lax constitution, nervous temperament or dissolute habits are in far more danger from this disease than the young healthy & robust. It requires less to reduce them to a condition of fatal depression, and reaction in them is almost always not fully developed. Habitual intemperance predisposes to septicaemia, dissolution, & of course increases the danger.

The type of the Fever also influences to some degree the prognosis. The Tertian as a general rule is more easily cured than the Quotidian, & does not so soon produce the disagreeable sequelae of ague. The quartian as I have observed is more difficult to suspend than either of the other varieties.

Intermittents sometimes change into a remittent or this is of course an unfavorable term; when this is the case the paro-

[illegible] become longer & longer until they run into each other. When the Tertian becomes remittent it doubles, and it is also said that remittent fever is most frequently of the double Tertian type.

Irregular intermittents are generally obstinate ones; and those that anticipate the hour of their recurrence every day, are difficult to cure & tend to the remittent form. Any prominent derangement of the digestive or sensorial organs, as excessive vomiting, or violent retching or stool; tetanus, delirium, diarrhoea, hemorrhage from the ~~bowels~~ Intestines, stomach, or bladder, are [illegible] unfavorable symptoms. When during the intermission the patient becomes very weak & relaxed; or [illegible] ankles become oedematous, danger may be anticipated. The symptoms which may be regarded as favorable are the gradual postponement of the hour of recurrence; [illegible] the mouth; the reappearance of habitual discharges, the [illegible] natural or [illegible]; and the conversion of a quotidian into a Tertian or a tertian into a Quartan. [illegible] that the disease is also [illegible] to yield.

[illegible] that [illegible] day

[illegible] of a [illegible] [illegible] [illegible] [illegible]

this [illegible] is [illegible]. The only diseases likely to be mis

taken for it are Remittent Fever, & [illegible]. From the former

it is distinguished by the absence of complete intermission, & as

a general rule [illegible] [illegible] [illegible] [illegible]

[illegible] intermittent. A mistake [illegible] in this respect would be of

little consequence, since the treatment is the same. From [illegible]

[illegible] it may be distinguished by [illegible] irregularity, the excessive

debility & the history of the patient's previous condition;

& the absence of the [illegible] disease in the course of which

it most usually occurs.

Of all the anatomical lesion discovered after death from

this disease, (and these are many) there is none which seems to be

essential; as all of them may be absent without affecting

the integrity of the disease. The spleen, the stomach, liver, small

intestines, the lungs & air passages, the heart & the brain, are

all found altered occasionally; not all at once of course, but some-

times one, sometimes another. The spleen is congested, enlarged,

softened, & it is said sometimes in a state of suppuration.

The enlargement varies from the slightest appreciable increase

up to 30 or 40 times its usual size. Sometimes it is ruptured,

& resembles a dark mass of venous blood. This has been thought by some to be the essential pathological change in this disease. It is often present, and the man who suffers long from Intermittent fever & escapes a diseased spleen may esteem himself fortunate; yet it is often absent, & hardly ever present in a short attack of the disease, unless the patient has been long exposed to the cause of intermittent fever, we cannot suppose it to be essential to constitute the disease. Indeed the fact that it often exists in those persons who have lived long under the influence of the specific cause of Intermittent fever would seem to indicate it to be one of the diseases which are produced in common with Intermittent by that cause. In the Stomach & Intestines are found the evidences of inflammation congestion, and rarely of ulceration. The inflammation, or rather the redness supposed to be the product of inflammation, is sometimes diffused over a large surface, sometimes in patches, & more frequently presenting an arborescent appearance. The Liver is sometimes changed in size, density, & colour. It is enlarged, sometimes considerably so, indurated, ~~& changed~~ or softened, & of a dark brown purplish or black colour. Some have fixed upon ~~this~~ changes in this organ

as those which are essential; but as they are so different different cases; and there are some in which the organs are quite healthy, we think the evidences of their essential nature are insufficient. The brain is sometimes found inflamed & softened, & the membranes injected, or infiltrated with serum, which is also seen sometimes in the ventricles. In the air passages, the mucous membrane, especially of the bronchial tubes is found reddened thickened; sometimes though very infrequently softened: the lungs themselves are sometimes congested engorged, or in the condition of hepatization. Pleuritis probably rarely occurs in the course of this disease, although formerly what was supposed to be "bilious Pleurisy," was a frequent occurrence. But it is probable that it was in most cases Pneumonia that was mistaken for that disease, since the science of auscultation, ~~and~~ then imperfectly understood has since revealed that Pneumonia is a far more frequent complication with Intermittent, than is Pleurisy.

The heart is occasionally, but rarely affected. When it is so, it is paler & softer than natural. Broussais has said that Intermittent fever more frequently than any thing else, gives rise to aneurismal enlargement of the cavities of

of the heart and arteries; but I believe that this lesion is not so frequent in this country as that distinguished pathologist found in the localities where he pursued his investigations.

These are the principal changes found after death from this fever, & probably, like the diseases with which it is complicated, & which in most cases produced these changes, some are produced by the original affection, some are consecutive & some precede it. In describing them, as I have had no opportunities of searching for them myself, I have preferred to follow the excellent treatise upon this disease; comprised in the interesting & instructive lectures of the Prof. of the "Principles & Practice of Medicine" in this school during the past winter.

The <u>cause</u> of Intermittent fever; that is, in what it essentially consists, has puzzled all who have attempted to examine the subject. All agree that it consists of some modification of the condition of the atmosphere which is capable of exerting a morbific influence upon the human frame, but upon what that modification depends, neither Chemistry with all its minutest analysis, nor Microscopy with its almost infinity of power has succeeded in detecting. They have given it a name — two of them

but they are both intermingle as the one only expresses deleterious influence, the other refers it to a habitat. it does not exclusively occupy.

Experience has demonstrated concerning it that a high temperature continued for 3 or four months in the year is necessary to its production. This is proved by the fact that it only exists where these conditions are present. In the northern states of the union & in Canada where the temperature is often as high for a short season as in those latitudes where it is frequent, ague is hardly ever seen, or if seen, only after an unusual continuance of hot weather. But unfortunately this is the only condition which we know to be necessary to its production; as it is found under almost every variety of circumstances, when this is present, & yet we also know that this is not all that is necessary to its production, since ague & fever is not present in every situation even under a tropical sun.

Malaria seems to be most abundant, or at least more uniformly present in marshes, fens, or low & damp situations, & this has led to an error which has long existed & still very extensively entertained, that it is peculiar to those situations. Facts which to me seem absolutely convincing have pro-

even that the disease may exist in situations where it was absolutely impossible it could have taken its origin from marshes. The facts mentioned by Sir Watson, Dr William Ferguson & others prove this; and in this country, also, although very often found to abound near them, it is quite gratuitous to in situations far remote from marshes of any kind. It has long been a favourite idea with many that vegetable decomposition was the cause which gave rise to malarious poison; but it is perhaps as false or at least as unfounded as the supposition. Yet, when vegetation is most abundant, other conditions being present, malaria seems to be cause single so, but as the testimony of one of the acutest observers of this disease has shown that it may exist not only where there is no vegetation whatever, but even on the nature of a surface upon which no cannot grow, we may fairly infer that the generation of this poison does not depend upon vegetation present but upon some of the conditions necessary to produce them. For we know that in order to produce an abundance of vegetables it is necessary that there should also be an abundance of rains in the spring & summer. When

these are wanting, vegetation is a rarity; & as a general rule, ague is infrequent also, not probably on account of their absence, but of the moisture necessary to produce them.

It is not necessary that there should be a large surface of water exposed to the sun; rather the poison, with a soil capable of holding it suspended, as it were mechanically, in the interstitial spaces existing in that soil, is equally efficient as the surface of a stagnant pool or lake, and probably more so. Nor is it necessary even that this moisture should be directly exposed to the sun's rays; for it may be covered by a stratum of perfectly dry earth, as in the cases mentioned by Sir Gilbert Blane & Dr Ferguson, in Holland & Walcheren. In these cases although the soil was perfectly dry on the surface, it was saturated to within a few inches of it with water. Dr Ferguson states — It was after an exceedingly dry summer that the 3d Battalion in Walcheren suffered from the Endemic fever to an extent that "was not supposed to be incident to warfare." But he describes the soil of this country as consisting of fine sand, & about one third part clay. Now it is

well known to almost every farmer that a soil thus mixed with clay is capable of absorbing a large quantity of moisture & of retaining it for a long time; a crop planted in a soil of this character is enabled [illegible], (if there is enough of carbonacious material) a vigorous growth within [illegible] deprived of the usual supply of rain a many weeks. This, it seems to me will account for the prevalence of malarious fever although its appearance was preceded by an unusual duration of dry weather. The soil was merely giving off the excess of moisture which it always contains, & which seems to be a wise provision of nature in order to protect plants from the effects of excessive drought. But it may be asked, why is not malaria found in high, or elevated situations as well as in marshes & valleys since, the showers moisten alike the table land above & the valley below? To this I answer that wherever you find a soil capable of retaining moisture near the surface, & [illegible] temperature, it is [illegible]: but there are good reasons why, miasma should be produced in these elevated situations in the first place, & secondly why they so rarely produce their ordinary

effects. Their dwelling upon the mountains is in open, exposed situations, and the bulk of population rapidly precipitated to the valleys below, & consequently not in contact with the soil long enough to saturate it; and even if absorbed there is no reason to believe that the exciting cause does not still keep the same law & gradually find its way to the valleys, just as a mass of quicksilver which was known to have been placed on the top of a hill was afterwards found at its base, after the vessels which contained it had decayed. This is, as we think a satisfactory reason why malaria is seldom found in those situations.

And suppose it is generated there: the places being freely exposed to the winds, it is rapidly dispersed by them, or so largely ~~mingled~~ diluted in the atmosphere as to be incapable of exerting its usual noxious influences. That this can be done no one who has given the subject the slightest attention doubts. On a day, for the most ignorant of those who live in those regions will tell you — that long before cold weather sets in, a strong "N. W. wind" they call it, will sweep the air-

[illegible]

[illegible] is another reason why [illegible] does not spread [illegible] the mountains. Experience has [illegible] that it is [illegible] than air; and [illegible] other [illegible] it — by processes which are not understood, it [illegible] — [illegible] subsides from these elevated situations [illegible] produced, before it has an opportunity of producing its specific effects. This fact in its [illegible] is also not understood. What it does not rise I have seen at least a palpable example to prove. On the eastern side of the beautiful little stream upon which stands our "Spring Fathers" first fixed their habitation in this state, whose scenery has [illegible] so vividly pourtrayed by the [illegible] P. [illegible] in his clever novel called "Rob of the Bowl" there exists a small creek extending a mile or two from the river, confined on either side by an extensive marsh which terminates in an abrupt hill rising some 300 feet above the [illegible]. This hill resides a family which I have long known, occasionally. One member of it knows what a visit to this marsh

[illegible] so that it [illegible] fever. [illegible] aware of the [illegible] from the [illegible] they do so. These [illegible] by miasma fever is not explained [illegible] where these two essentials, [illegible] and [illegible], are present. No one ever said intermittent fever after the earth is constantly dry, or where water when falling upon it rapidly sinks deeply into the earth. Thus in the sandy deserts of Africa and Asia, although, it is true, there is stagnant water and no want of moisture, yet the loose sand existing to the depth of many feet offers no obstacle to the rapid percolation of the water into its depths. Here I believe genuine malarious fevers are unknown, yet where in these climates we find stagnant collections of water, or that kind of soil from which water is readily parted off — in the margins of lakes & the banks of its streams, or in the vicinity of its allies, there we see the fevers in their terrible form.

Another fact in relation to malaria is ~~[illegible]~~, that it always a strong affinity for water — (and the

might lead us to suspect something in regard to its connection with that fluid), and that it cannot therefore traverse any extensive surface of it. It does not separate by a narrow stream from a very miasmatic region have entirely escaped the disease, whilst a vessel though near to the opposite shore has frequently produced it in one of these individuals.

The poison is also capable of being transported in its transmission from place to place by woods or hills, or anything which is capable of arresting the progress of a current of air. Thus a place before quite healthy has been suddenly rendered very unhealthy by the cutting down of a wood which stood between it & a neighboring marsh.

It seems that this poison is most intense at night, and exposure to it during this time has been apt to be followed by the fever. The following incident which I heard related by the Prof. of Practice in the University of Md. illustrates both this & the last mentioned trait in relation to its affinity for water:

An officer on board a vessel, if I recollect right, was

[illegible] with the coast of Africa, nothing if possible to [illegible] the terrible malarious fever of that country, which had been so fatal to Europeans; let mind & remain on land as little as possible, & always took care to sleep on board his ship. Notwithstanding, he was attacked. He escaped. At last some accident compelled him to remain all night on shore; and he was immediately attacked with the fever of the country.

It has been said that other causes besides malaria are capable of producing Intermittent fever. These are indigestible substances in the stomach, worms in the alimentary canal, & the absorption of urinous matter into the bladder or mucous or any other source of temporary irritation: but these I think are not genuine cases of Intermittent fever. Chills are often produced at a time, & in this, signs of genuine ague be not being preceded by reaction corresponding to the increasing of the chill, & by [illegible] the cause of the irritation is also repeated & continued. Habit has also been accused of producing it, but I think upon insufficient grounds. The experiments tried by Monsieur Brachet, (See Wood's Practice, Vol. 1. p. 241) of ~~Dr~~ baths

ing every night in the Dacoo, to and the end of October,
I think by no means satisfactory; as it is not at all cer-
tain that he did not catch a genuine Intermittent by
a nocturnal exposure; miasma in his case being the
[illegible]
[illegible]
the mention, he issues the only following as genuine
[illegible]
I think then that whenever intermittent fever is produced
[illegible]
be [illegible]
[illegible]
this Influence," it is requisite that there should be a sur-
face [illegible]
should be soaked with water & then dried under a high
temperature; and the higher the temperature and the quicker
is the drying process, the more plentiful & more vi-
rulent (more virulent probably because more plenti-
[illegible] is the poison that is evolved". (This is the [illegible] opinion
of [illegible] Dr. [illegible] quoted.)
But the poison is not a [illegible] vegeta-

tion is most plentiful, not on account of their humid decay, but of the [illegible] & most [illegible] to prove that it is most abundant in marshes & fens because [illegible] (in the proper latitudes) more uniformly & most abundantly prevent: that it is of great specific gravity [illegible] air, & therefore subsides to the lowest situations & is generally confined to them: that [illegible] affinity for water & cannot therefore traverse any extensive surface of that fluid: that it is capable of being carried by the atmosphere to a distance from the place of its generation, and [illegible] for that purpose [illegible] of a current; air is capable of preventing its further extension; & finally that it is most active at night, not on account of any peculiar influence which it possesses at that time, but because the human system is less able to withstand any morbific influence during that season, on account of the languidness of the circulation, the less energy of performance of all the vital functions & the consequent diminution of the force of vital resistance, which exists in the system, as in all diseased action. These conclusions I have arrived at

from [illegible] the [illegible] of other [illegible] are [illegible]
[illegible] not [illegible] to [illegible] the power [illegible]
opportunities for [illegible] observation and
from having lived all my life in [illegible] districts.
Although [illegible] is to [illegible] as [illegible]
malarious poison is, [illegible] from the [illegible]
the conditions necessary to its production, & the cir-
cumstances which [illegible] the [illegible], and we are
furnished with valuable information as to the [illegible]
by which we may avoid its disastrous effects. Here
choice or necessity, [illegible] we [illegible] in [illegible] idea.
There is no question in connection with this sub-
ject upon which writers do not agree, & upon which
I have to [illegible] myself considerably [illegible] the ni-
cety. Does continued exposure to malaria [illegible] &
[illegible] in [illegible] [illegible] [illegible]
[illegible]? I will [illegible] that it does often [illegible], &
the facts which have [illegible] me [illegible] [illegible]
drawn entirely from my own experience, which as
before stated extends back to the time I was first capa-
ble of [illegible] things.

When a small boy, I have often heard of the
[illegible] suffered from intermittent fever in the country
at the mouth of Cape [illegible], was not of a plethoric
[illegible] than men; although the latter were far
more exposed than the former. Among the boys
[illegible] suffered from this [illegible]
[illegible] not [illegible] the only one of the family
who was afflicted. The nerves [illegible] in the forenoon
[illegible], although [illegible] exposed [illegible]
[illegible], while the children [illegible] to partially [illegible] in
the morning until after nine [illegible] the
[illegible] stop [illegible] feed from the complaint. After the age of 10
years, the susceptibility gradually disappears; & it will
generally be found that in far a majority of the cases
of intermittent are under this age, or happen in indi-
viduals who are not habitually exposed to this dis-
ease. Up to the age of eleven I had the ague almost
every autumn. I have then, although I lived six years
in the most malarious districts of the State of Alaba-
ma, I never [illegible] an intermittent fever. Every time

until I was in a susceptibility to the poison by residing in this city. Since living here - now nearly four years, every visit to the country has been followed and attack of ague - then I removed to Alabama, I was accompanied my brother, who had resided five years previously in Washington City; who although not more exposed than I was, & far more prudent - for I was too young to think of adopting any hygienic restrictions - He was attacked by malarious fever, & narrowly escaped death, He has remained there ten years since & has not been attacked again. While there, I observed that strangers coming to the country, especially those from the interior cities, were invariably attacked by the fever during the first summer of their residence, while those who had lived for several years were rarely attacked, & if they were still liable to it, it was some accidental exposure, or some excessive imprudence in diet. I observed that the night air was exceedingly apt to produce an attack, even in those who were supposed to be acclimated.

It was supposed that if the large number of slaves

[illegible] there etc's
a fifth [illegible] in the [illegible] of [illegible]
nation, but they were in more danger than the whites on
[illegible] pro-
ce the most virulent of malarious poisons that generated
on the [illegible] plantations and in situations where
one would think it was impossible for any human creature
to live. So great is the dread of a fever contracted in these
situations, that [illegible] planters have to give
2500, or 3,000 dollars a year to an overseer whose only
[illegible] lord of gain & physical [illegible]
[illegible] a large [illegible] of [illegible]. Yet even in
these places, after having survived one or two attacks
[illegible] pill & obstinate [illegible] of [illegible]
[illegible] would be [illegible] [illegible] increased
[illegible] significant [illegible]
[illegible] attained an advanced age is infinitely greater
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]

and [illegible] there is [illegible]

[illegible]

[illegible]

of [illegible]

[illegible].

In this state an instance came under my notice which [illegible]

[illegible]

[illegible]

liability of strangers to contract it.

[illegible]

[illegible]

[illegible]

[illegible] never suffer from in-

ters [illegible] but the persons living in [illegible]

[illegible]

[illegible]

[illegible] fall. [illegible]

[illegible] neighbourhood.

[illegible] ~~fall~~ anything [illegible]

[illegible] the fevers [illegible]

to this village. But a more convincing fact [illegible]

[illegible] in any notice, in the following incident.

A young man who had been res[illegible]
[illegible]
At the time he supposed to have been labour-
[illegible]
[illegible] his residing in this village about the middle
[illegible] October. The day after his arrival he went snipe
[illegible] usual
gunning, [illegible]
ing day he was attacked with intermittent [illegible]
[illegible]
and on inquiring he learned that his [illegible]
[illegible] had [illegible]
[illegible] village) for more than twelve months.
He [illegible]
[illegible] literally [illegible] to a [illegible]
sufficiently virulent to produce in a healthy
[illegible] man its effects in less than twenty four
[illegible]! [illegible]
[illegible]

[illegible]

[illegible] month [illegible] but [illegible]

[illegible] time we [illegible] been [illegible]

[illegible] under [illegible] visited [illegible],

[illegible] about the middle

[illegible]. The day [illegible] usual he went with

[illegible] usual

gentlemen, [illegible] [illegible]

[illegible]

and [illegible] had [illegible]

[illegible]

He [illegible] literally [illegible] to a person

[illegible] apparently [illegible] [illegible]

[illegible]! They are [illegible]

[illegible] operation

to the population in the city [illegible] is in some of the most
malarious districts of the adjoining counties, and
[illegible] to a slight extent in
the country, [illegible] the cause of the activity of the
malaria. And again: if the [illegible] go from the city
to [illegible] [illegible] fever [illegible]
[illegible] [illegible] [illegible] of the fever, either [illegible] there is [illegible]
to the city [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] population [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] cases of malarious fever under treatment, every one
[illegible] [illegible] [illegible] who [illegible] in the [illegible]
[illegible] [illegible] [illegible] [illegible] the country
to disperse [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
of our city.

These facts & [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] I had [illegible] any medical
authority on the subject, [illegible] [illegible] [illegible]

in [illegible] as [illegible] de[illegible]
[illegible] as [illegible] and [illegible]
[illegible] prove [illegible] by [illegible]
[illegible] in the Island of [illegible], in [illegible] &
Africa, [illegible]. But though [illegible]
[illegible] persons may [illegible] to [illegible]
[illegible] as being sickly & puny; feeble in body
& [illegible]; [illegible] & [illegible]
limbs; with a yellow, sallow, complexion. This
does not accord with my experience in the country,
except in regard to the complexion, for I only [illegible]
[illegible] suffered from the complaint. I have generally
[illegible] the inhabitants of [illegible] neighbourhoods as
strong & robust looking as those living in other localities
[illegible] healthier [illegible]; & these I have escaped the
disease altogether, [illegible] coming in [illegible]
[illegible] with complexions as [illegible],
tanning [illegible] very [illegible] dull & [illegible], as those [illegible] as
[illegible] of [illegible]. But persons who [illegible] had the
[illegible] generally characterized by the low [illegible],
a head by the [illegible] which [illegible] & [illegible] eyes

to remove. The treatment of [illegible], is a subject of [illegible] importance, for there is probably no disease more amenable to judicious treatment, & none which if suffered to proceed without interference, produces more inconvenient, probably more fatal results. Hence the, singular as it may appear, the propriety of arresting the paroxysms of an intermittent as early as possible has given rise to much discussion. Those who hold the negative on this question surely forget that to save life is not the only object of a physician's care, for his opportunities & his abilities to do this are [illegible] both in those diseases which are not dangerous, as well as in those which are necessarily fatal, the first, & often the only indication is to relieve suffering; [illegible] physician's [illegible] may [illegible] with the safety of his patient, does not deserve the confidence & support of the people nor the countenance of his brethren in the profession. Here, we name a disease which [illegible] may [illegible] inflict suffering, but in the [illegible] producing or [illegible] disease of some [illegible] the [illegible] may [illegible] [illegible] both indications are [illegible]

[illegible] patient [illegible]

[illegible]

[illegible] debility [illegible] will [illegible]

[illegible] in [illegible] weeks, but [illegible]

[illegible] years; & even in those two weeks [illegible] may get an enlarged spleen or an inflamed liver which in [illegible] of four months, which [illegible] produce his death. There can then be no reason whatever for suffering this disease to continue when it can be prevented; & it would therefore be absolute cruelty not to stop it at once, when the physician has an opportunity to do so.

The treatment of this disease has been divided very naturally into that which is required during the paroxysm which is merely palliative, & that which is demanded during the intermission which is radical. During the paroxysm, although I believe nothing will arrest it entirely after it is begun, much may be done to relieve the patient's sufferings & diminish the duration & severity of its various stages. The cold stage may be shortened or avoided

[illegible]

and the treatment confined to what seems to be the legitimate object, the relief of the symptoms of the stage which precedes it.

For relief during the cold stage many remedies have been proposed which it is not worth while to enumerate and of most of them, but if, as I think, none of these are [illegible] dictated by common sense, the application of external heat by covering, warm bricks bottles of hot water placed near the patient's body, friction, [illegible] antispasmodics [illegible], & the internal administration of stimulants are the means most likely to relieve the coldness & to counteract the depression resulting from it. In the administration of stimulants however we should always remember that this reaction itself is tending to produce violent reaction, [illegible] that are best permanent in their effects. Ammonia & Ether, oil of [illegible] Brandy are the best & either of these may be given in appropriate doses.

If there is not much cerebral disturbance Opium or some of its preparations may be given, but this has been recommended in small doses, for the purpose of exciting a rise, prevent its recurrence. It is certainly a bad opinion, this prescribed a large dose of Brandy or any other powerful stimulant would be under similar circumstances; and this we know will benefit a barrister occasionally. But in cases attended with great gastric irritability Laudanum will often not only elude the distressing attempts to vomit, but destroy the result of the cold emptions — which their duration.

It has been proposed to administer it before an expected paroxysm — strongly urged, so that it may be in full operation at the time of its recurrence. This has been often done it is said with success — preventing their recurrence. But it often fails also, and we infer that there is almost always more or less of cerebral congestion in almost every case, we cannot not admit it we only in-

appropriate, [illegible] dangerous. Should there happen to be any fatality [illegible] sense, we might consider it one only congestion of the [illegible] of the brain [illegible] apoplectic effusion, [illegible] a fatal termination [illegible] having [illegible] a little [illegible] might have been perfectly [illegible] the [illegible]. From these & other causes this remedy has fallen into disuse & it is now seldom applied except to relieve a distended stomach or the ingestion of irritating or indigestible articles of diet.

Another remedy proposed by a physician of [illegible] S.C. I think [illegible] name I do not now remember, is the cold bath. He states that he has applied this in many instances & with the effect of establishing reaction almost immediately, & in very many cases of putting an end to the disease entirely. I have witnessed the effect of the remedy in two instances, & in both it was attended by the most marked success. They were both accidental however; a boy [illegible] on his way home with a chill [illegible] to [illegible] stream [illegible] [illegible] the [illegible]

escaping a [illegible] of cow chrome in by the capsizing of a boat. Both of them were cured of the cow [illegible] cow, but whether by the cold bath or the fright I could not say. For extreme complaints of ~~another remedy~~ the cold bath would prove to be a great many cases; for very few would consent to be already shivering with cold to plunge into a cold bath although it promised an immediate relief to this disagreeable sensations.

Another remedy proposed by Dr Macintosh of Scotland is vaccination. This he says (and my [illegible] also bear him out) will very often prove immediate and to the rigors & diminish the severity of the febrile symptoms which follow. In the hands of others, although often beneficial it has not performed all that its originator claimed for it; and I think that the cowpox which has crowning its use hardly compensates for the risk we run in using it. Except in the case of the vital fluid there are few things which seem to produce a general & consequent debility, than a fever and very few know who has had any experience in it-

ing this disease [illegible] difficult it is to cure in anemic patients, & how [illegible] often [illegible] it so-ceases. Now this [illegible] is admitted [illegible] intuitively to be frequently only palliative; merely [illegible] the symptoms for the time & frequently [illegible] according to others failing [illegible] this. It is to therefore [illegible] considerable risk of converting a simple ~~[illegible]~~ intermittent [illegible] into a very obstinate one; and of so educating the patient as to greatly complicate his sufferings, even to produce a fatal termination of the disease. Should the hero remedy fail of accomplishing the object intended. It is moreover entirely opposed to our preconceived ideas in regard not only to this complaint but to disease in general, to apply the most powerful & direct sedatives to a condition whose most prominent features are those of depression. Even the "Homoeopathists" also I believe have never dared to go this far; & it would therefore be to "cut the cord" to apply such a remedy in a disease which [illegible] a [illegible] experience has demonstrated can only be cured [illegible]

treated by Jones [illegible]. The reasoning of professor Wood on this subject seems to me to be conclusive. "The congestion of the cold stage — he says — is the result of a deficient condition of the nervous system, in which the heart & pulmonary capillaries participate ..... It is not therefore the accumulation of blood that produces the prostration, but this that causes the accumulation ..... If the heart & lungs are full, because they are overloaded, then the removal of a part of the blood might be useful; but he says it is, not fully, ~~because they are overloaded~~: are unloaded, & they are fully!! It is therefore no confidence that I have in the remedy, & attributes all the effects which have followed it to the imagination of the patient.

There is a remedy however for the cold stage which has succeeded all & even more than all the good effect of bloodletting, without risk of producing the evil consequences which may follow that remedy. It is the application of the tourniquet to one or both of the thighs. This constricts vessels in the same manner as

[illegible] does; it is by the temporary abstraction of a portion of the blood, and the instantaneous difference between that time & no abstraction of the vital fluid. By applying a ligature sufficiently tightly to prevent the flow of blood through the superficial veins a large quantity of blood may be for the time withdrawn from the general circulation, & all the good effects of Bleeding (if there are any) thus obtained: but it is highly probable that the pain of the operation, - the [illegible] being strongly [illegible] to it & the imagination [illegible] deal to do with the effect: for it is well known that anything which powerfully excites the attention & [illegible] the duration & diminish the severity of a chill. I very well remember that on one occasion I got rid of an ague [illegible] by being strongly [illegible] political discussion into which I was drawn just as the chill was commencing. [illegible] it acts in this manner, providing it was act artificially, & [illegible] we should not employ it, since the abstraction is inevitably [illegible] & [illegible] always [illegible]

to try the [illegible] if I had [illegible] to consult [illegible] however is the neglect of too many [illegible] first points [illegible] are only [illegible] to be depended on.

The treatment of the 1st stage is simple enough. If the pulse is very full & strong & the [illegible] time frequent & [illegible] from the arm - rarely more than once - or if local inflammation is threatened, by cups & leeches. The [illegible] of blood drawn must be regulated of course by the effects upon the system. If the surface is [illegible] & dry, & it be agreeable to the feelings of the patient sponging the surface with cold [illegible] will often give much relief; at the same time [illegible] diaphoretics may be given internally. Cold drinks, even [illegible] of Ice allowed to dissolve in the patients mouth, will contribute much to his comfort. The co-pervasive spong[illegible] is also an admirable remedy in this stage. I have tried it myself, & found it [illegible] to be most agreeable to the stomach, but tends to produce a [illegible] in the [illegible]. It is said that

in the [illegible] materials for making this, [illegible] grains of the [illegible] dissolved in water, or [illegible] water will answer as well. Spirit of [illegible] is also a good [illegible] if there is not too much [illegible] open in the form of [illegible] powder may be administered with the [illegible]. There are many other remedies which have been used according to the fancy or predilection of the practitioner; but it matters little which one of the class we may use, provided we keep steadily in view the three principal indications furnished by the patient condition. First to arrest or [illegible] local inflammation; Second to [illegible] vascular excitement & Third to relieve the [illegible] of the surface.

In the sweating stage, but little is to be done, — little is required. It is simply a proof of return [illegible] the heat of the surface, [illegible] salutary. It is only when it is excessive, & goes beyond the object it was intended to accomplish, that interference is required. It may be [illegible] by wiping the surface & exposing to air. It may be necessary to sponge with water.

The treatment during the first twenty hours is [illegible] more important [illegible] of the paroxysm, since it is here [illegible] must be [illegible] of the [illegible] attack of the case [illegible] there are remedies which [illegible] avail a [illegible] period [illegible] is [illegible]; & of these circumstances may [illegible] us to select [illegible] authors. [illegible] remedy par excellence [illegible] is bisulphate of quinina & its preparations. [illegible] these the [illegible] of quinine is the best, because it is [illegible] certain in its effects, & is [illegible] borne by the stomach [illegible] ly can be given in large doses. [illegible] being a desired stimulant [illegible] fever for its exp[illegible] administration. After having [illegible] our patient [illegible] if the symptoms [illegible] & given him a [illegible] if there was no [illegible] in the [illegible], & the febrile symptoms partially [illegible] slight [illegible] disturbance is no [illegible] ication for its use. [illegible] pouline [illegible] grains [illegible] two [illegible] length of the intervals [illegible] mixture was long [illegible]

give a small [illegible] a large one, & continue those doses until the patient had taken fifteen or twenty grains; so timing them that the last dose should be taken just before the [illegible] of the expected paroxysm. It has been said that sixteen grains is enough to stop any intermittent, but probably some persons require more than this. I think a safe guide to the quantity required, without any absolute mention, is given by [illegible] the symptoms which ordinarily follow its use, nervous excitation, tinnitus aurium &c, & then give it [illegible] in sufficient quantity to keep up this effect. It is probable that in this way we shall be most sure that the medicine is capable of exerting its [illegible] of the drug, & what is more important, with [illegible] running the risk of not giving enough to stop the chill.

It may be given in powder, pill & solution. The first is the most objectionable mode of its administration on account of its intensely bitter taste, which takes time & is exceedingly difficult to get rid of. The second is the least objectionable, since it takes

avoid the taste of Morphia; but it can not be given in this way to children, or to persons who cannot or think they cannot swallow a pill. The solution is the most convenient of its administration, of which the following is said to be an elegant one: only pronounced so strong, I suspect, by those who have never taken it, as I have never yet met with any solution of Morphia that was pleasant to me:

℞. Quinia Sulph. grs. xvj, Dilute Sulphuric acid ℥ss xvj, Aqua Ammoniae ℥j: of this solution a teaspoonfull may be given every hour, or two hours according to the exigencies of the case. This will in a large majority of cases stop the first paroxysm; but if it does not a spoonfull of the treatment will most invariably prevent a second. The remedy should not now be discontinued however for the disease is liable to return. The patient should continue to take it in diminished doses for a week or more after the last; but a few days hence may be sufficient, and as the patient is usually in expectation of the disease has suffered from the complaint, advantage

will be derived from [illegible] ing with it one of the preparations of Iron.

The treatment here is down to some extent to apply to the simple uncomplicated form of the disease. In this or preparation, or an antiperiodic is required, as for a simple [illegible] may be often dispensed with. In the [illegible] variety however it is different. Here the inflammation [illegible] as an irritant, will prevent the effects which would otherwise flow from the medicines; while the antiperiodic acting as a tonic will increase the flammation. It will therefore be proper to subdue the inflammation first by [illegible] local and general antiphlogistics, refrigerants, cathartics, [illegible] to the amount of inflammatory [illegible] & when this is accomplished, push the quinine as in the former case, watching it carefully however, for a return of the inflammatory symptoms, preparing to meet them at once should they occur.

In the malignant variety the treatment is again modified. Here we have the [illegible] & a rapidly [illegible]

[illegible] object is not alone to sustain your patient under the poison attack — to bear him through it as it were — for we know that we are only postponing the same, but [illegible] some antidote for the poison itself. And in Quinine you have that agent. No matter what may be the contra indications to its use, Quinine in large doses [illegible] must be given at once for it is our only hope. Ten, twenty, or even thirty grains may be given every two hours, combined with opium if there is [illegible] irritability of [illegible], with astringents if there is excessive diarrhoea, with stimulants if the case require it. If the quinine is not retained by the stomach, it may be thrown up in [illegible] in large quantities, [illegible] gled in the thin starch [illegible] and with 40 or 50 drops of [illegible] opium. It is desirable to introduce it into the system by every possible avenue, the cuticle may be raised & the quinine sprinkled on the raw surface. It must in this case be diluted by mixture with gum arabic, as it is very irritating & has been known to produce extensive sloughing

by thus energetically pushing the remedy, it will often happen that a second paroxysm is to be prevented, or if not it will at least be rendered milder: but we must not relax our efforts; the Quinine must still be continued in smaller doses, & it is not until two or three intervals are passed over that we should consider our patient as all safe. Those however who expect to meet with so fortunate a result in all their cases will be disappointed; for many very many of them will test the most powerfull efforts of Skill. The patient is vomiting incessantly so that nothing will remain in the stomach, & Diarrhoea which nothing can controul prevents the retention of remedies in the rectum; notwithstanding the most powerfull stimulants both internal & external he gradually sinks until death comes sometimes calmly, sometimes in the midst of convulsions puts an end to the patients sufferings & to the labors of the physician.

There are as I remarked before many other substances which are antiperiodic, but as they are all inferior to Quinine I shall only refer to them.

The use of this as has been recorded as very good in

[illegible] importance is [illegible] serious, it is to be said [illegible] ill some [illegible] succeed where [illegible] quinine has failed; but one very decided objection to it is that you cannot push it [illegible] a rapid injection [illegible] said, without risk of poisoning your patient. Its advantages are that it can always be given during the paroxysm, is cheap, being sold [illegible] can be given to children [illegible] cannot be [illegible] [illegible] Quinine in any form on account of its extreme bitterness. It is most usually given in form of Fowlers solution or Liquor Potassæ Arsenitis, dose 2 to 3 drops to children 8 or 10 to adults. [illegible] its [illegible] injection of the [illegible] portion of the [illegible] it should be suspended.

The next of these remedies is Salicine or extract of willow bark. This has long enjoyed some reputation in this disease which is probably [illegible] as its character has settled in the minds of practitioners generally [illegible] in a [illegible] large number of cases. Drs. Chew of the University of Maryland, [illegible] give it a fair trial, [illegible] to be equally as efficient

as Quinine [illegible] in a little more double the quantity required [illegible]. In his hands [illegible] hour [illegible] equal to 3 grains of Quinine every two hours. It would even then be far cheaper than the other agent, [illegible] is the agent [illegible] generally used by the profession.

Salts of Iron – Prussian blue – [illegible] a [illegible] in this [illegible] the hands of some [illegible] time [illegible] combined with the [illegible] [illegible] administered in doses of [illegible] every two or three hours.

Sulphate of Zinc has [illegible] in this disease in doses of one quarter of a grain to two or three grains & Sulphate of Copper in combination with Quinine in one quarter grain doses.

Tartar Emetic, [illegible], Sulphur, Spiceweed, Wormwood Bark, Eupatorium, Spider weed, Cayenne or Piperin, Chamomile, Orange and [illegible] vegetable substances have been used from time to time with success, but they are all inferior to Cinchona & therefore only to be tried when that

agent has failed or cannot be procured. I therefore do not consider it necessary to give a more minute description of them.

One curious feature in the history of this disease is the readiness with which it sometimes yields under the force of imagination. The simplest acts have put an end to it when performed with a full confidence in their efficacy. Thus tying a certain number of knots in a [illegible] tying it [illegible] up a chimney; stopping a [illegible] the horse hand of a clock, have each cured the patient [illegible] Charms and amulets have [illegible] a great [illegible] in the [illegible] far. If all the simple agents which have cured this disease could be collected with [illegible] they would form an [illegible] [illegible] and although [illegible] [illegible] it.

It [illegible] that when the enthusiastic [illegible] of a charm

[illegible] promise of the learning & Wisdom that characterized him in after years; driving out in the country [illegible] with a young man of his habits as his aff, on a spree, [illegible] for a [illegible] in that condition [illegible] medical students [illegible] pass day very often finds themselves just after Christmas [illegible] out of [illegible] do. There is no [illegible] alternative left [illegible] must depend upon the hospitality of charity of those [illegible]. That night they stopped at a farm house on the way side. [illegible] they were about to [illegible] out [illegible] morrow they saw a young [illegible] whose [illegible] appearance [illegible] upon in [illegible] learned [illegible] [illegible] ll just [illegible] from agent [illegible] Hale wishing [illegible] sensation [illegible] entertainment [illegible] the [illegible] do. [illegible] they [illegible] [illegible] & she was [illegible] [illegible] age. [illegible]

Many years after this arose [illegible]
[illegible] during which [illegible]
in the [illegible]
fession, & was now a judge in the course of his judicial cir-
[illegible]
[illegible] of [illegible]
[illegible] the [illegible] off [illegible]
[illegible] & as evidence of evil practices it was stated
that she wore an amulet under her [illegible] received
from the enemy of mankind. The judge asked it [illegible]
[illegible] & on searching, [illegible] found the identical [illegible] sheepskin
which he had given her [illegible]
it showed the people what it [illegible] to them that it
was impossible [illegible] one [illegible] regarded as [illegible] that
a portion of the holy scriptures could have any [illegible]
evil [illegible] and [illegible] the old [illegible]
[illegible] that [illegible] England [illegible] [illegible]
ing [illegible] whenever they choose to adopt that [illegible]
[illegible] Tattling. I [illegible] are by [illegible] convincing that [illegible]
[illegible] be true. It is not [illegible] in [illegible]
[illegible] cured a fever.

An
Inaugural Dissertation
on
The Bile
Submitted to the Examination
of the
Provost, Regents
and
Faculty of Physic
of the
University of Maryland
for the degree
of
Doctor of Medicine
by
B. Taliaferro
of
Amherst County
Virginia
1853

The Liver has ever been regarded by medical men as occupying a conspicuous position among the important viscera of the human subject, not for its superior dimensions alone, but for its Physiological importance & Pathological interest. For to a proper discharge of its office, observation early ascribed the power of determining, in a great degree, the wonderful concert in the actions of the organs engaged in the several complex functions of Digestion, Nutrition & Secretion: the three great processes of nature, whence issues the harmony of organic life. In presenting a practical treatise on the bile, it will be necessary to notice in succession the process of its secretion, its physical & chemical properties & its Physiological uses. In order to an intelli=

ble account of the mode in which the bile is produced, a description of the minute anatomy of the liver is first necessary. In every gradation of animal life, in which the existence of a distinct digestive apparatus has been demonstrated there have also been unequivocal evidences of the presence of a biliary system of greater or less simplicity, varying, of course, with the degree of developement of the organism in which it is found.

The Hydra, which has been regarded a simple stomach, has on the surface of the membrane lining its walls, yellow cells containing a brownish matter, which we regard as the simplest type of a biliary apparatus.

On ascending the scale of animalization we find in the Radiata, Articulata & Mollusca groups, we find the hepatic cell arranging themselves around cecal prolongations of the stomach, which furnishes the first instance of a tendency to approximate the

glandular organs of higher animals
The principal difference to be remarked in ascending the scale of animal development, consists in the increasing compactness of the glandular mass & its greater isolation from the walls of the alimentary canal, this communication being through the medium of an excretory duct

In the vertebrata, the liver is of a solid & parenchymatous texture. The parenchyma being made up chiefly of bloodvessels, & a mass of cells, whose office it is to secrete the bile. The perfection of the organ in this class of animals, contrasts very strikingly with that observed in most of the Invertebrata, though the ultimate object is equally subserved in either class.

The secreting cells, which form the principal part of the parenchyma of the liver in man & the higher vertebrate

animals, are estimated at from 1/1500 to 1/1000 of an inch in diameter. They are of a flattened spheroidal shape, commonly lie in masses with their faces towards each other. Each cell presents a distinct nucleus & its cavity is filled with a yellow amorphous fluid matter, having interspersed through it a number of fat globules.

It is mentioned by some, that when these cells have elaborated & matured their contents, they burst their envelopes or cell membrane & discharge themselves into the minute biliary ducts, which take their origin in contact with these ultimate cells & thus form a connection between them & the main hepatic ducts. This theory of the mode of escape by the bile from the eliminating cells, is supported, we think, by the detection of the detritus or remains of the

cells in the secreted bile, which is merely a matter of interest, inasmuch as it is a subject of curiosity only.

The Hepatic artery entering the liver as a single vessel, breaks up, when it has penetrated the organ, into an infinite number of minute branches, some of which are distributed to the sheath containing the large vessels of the liver, others to that portion of the same membrane investing the different lobules, & others to the interior of the lobules themselves, & are thus brought into close contiguity with the ultimate cells.

By such a distribution of the arterial branches, the whole structure of the organ is supplied with nutriment.

The ultimate branches of the artery terminate in the minute venous plexus,

by which the blood which was previously arterial is carried in company with the food from the vena portae to the lower branches & to the trunk of the hepatic vein.

The vena portae receiving the blood from the chylopoietic viscera, bears with its many impurities, carries it to the liver to be relieved of some of its refuse elements, during the process of the separation of the bile - The vena portae enters the organ in company with the hepatic artery & breaks up into its ultimate branches as does the artery, forming by its minute radicles, a network of vessels which carrying their venous blood into contact with the biliary cells & thus furnish the materials for the formation of bile

This portal venous plexus, receives, here, the blood from the terminating radicles of the hepatic artery & forms a connection

with the hepatic vein at its origin in the centre of each lobule.

The liver is composed of an infinite number of lobules, about the size of a millet seed, which literally are nothing more than bloodvessels, containing within their canaliculi the elementary bile cells. Each lobule may be regarded as a true representative of the entire organ, consisting of the biliary tubes & the ultimate ramifications of the hepatic artery & portal vein uniting by a network of capillaries with branches of the hepatic vein, which takes its origin in the centre of each lobule & gives exit to all the blood entering the liver, which has become venous.

The biliary cells, possessing an inherent secreting power, form its product according to Mr Ed[illegible] & adopted by Mr Carpenter, into an elementary membrane.

which lines the biliary ducts & and has expanded extremities, to catch the contents of the bursting cells, & through this membrane the bile is carried into the minute biliary ducts, which uniting form the hepatic duct through which it travels as far down as the cystic duct, but it is not needed for the immediate process of digestion & ascends through the cystic duct into the gall bladder, where it remains until needed, when it is conveyed along the ductus communis, formed by the Hepatic & cystic ducts, into the descending portion of the Duodenum. Having examined the the minute structure of the liver, we will next notice the properties & uses of its secretion. The Bile is of a yellow greenish color, varying in the degree of its color in different instances is intensely bitter, has a peculiar nauseous smell

& is somewhat viscid in its character, though this last property is no doubt, rightly attributed to the mucous it contains

The want of conformity in the results of experimenters, who have investigated the proximate principles of the bile, leaves us still in doubt as to the accuracy of the relative quantity of each of the solid matters, which are supposed to compose about one tenth of the whole secretion. One eighth is stated to be alkaline & earthy salts, corresponding with those found in the blood, but not bearing the same proportions to each other. Bile is said to be essentially a soda salt, containing an acid distinctly resembling the resinous or fatty acids, to which the name Cholic or Gallenic acid is given. The fatty matter of bile, consists mainly of the spermaceti like substance Cholesterine.

the proportions of which, in health, bile is very small, but is greatly increased in several diseased conditions of this secretion. It is supposed to form the chief if not the whole or entire ingredient of biliary secretions. It is a white crystallized fatty matter, without taste or odor composed as are the other fats of the body; of Carbon & Hydrogen. The coloring matter of bile has not yet been analyzed with sufficient success to afford us a satisfactory conclusion as to its real nature. But there is great probability that it is nearly related to the coloring principle of the blood. For the addition of a mineral acid to the coloring matter of the bile, produces in it, the successive changes of Green, Blue, Violet, Red & Brown precisely the same changes that occur in the coloring matter of the blood, on its

the proportions of which, in health, bile, is very small, but is greatly increased in several diseased conditions of this secretion. It is supposed to form the chief if not the whole or entire ingredient of biliary concretions. It is a white crystallized fatty matter, without taste or odor composed as are the other fats of the body, of Carbon & Hydrogen. The coloring matter of bile has not yet been analyzed with sufficient success to afford us a satisfactory conclusion as to its real nature. But there is great probability that it is nearly related to the coloring principle of the blood. For the addition of a mineral acid to the coloring matter of the bile, produces in it, the successive changes of green, Blue, Violet, Red & Brown - precisely the same changes that occur in the coloring matter of the blood, on its

a portion from an ecchymosis. It is thought probable, that these substances exist in the blood, in a condition not very far different from that in which they are found in the bile. Cholesterine may be obtained from the blood by an analytical process, & its presence there, is also indicated by an occasional deposit in other parts of the body, as in the fluid of local dropsy. The coloring principle of bile is no doubt derived from the Hæmatine of the blood. It is not probable however, that the bile, previous to its secretion by the liver, exists as such in the blood, but we suppose its elements to be derived from the normal decomposition of the different tissues of the body & to be carried to the liver through the medium of the circulation, in a far more pernicious character than after they have been

combined elaboration & discharge from the secreting cells of the liver & then resorbed into the circulation. This is to be inferred from the fact that if the action of the liver be diminished by any cause, so as to embarrass its functions & allow the crude elements of the bile to remain in the circulation, serious consequences may soon ensue. But when, as in Jaundice, the bile is reabsorbed into the circulation, in consequence of obstruction of the biliary ducts, so as to stain the tissues with which it is brought into contact, no serious injury will of necessity follow.

How the poisonous properties of the elements of the bile are so modified by the action of the liver as to render them comparatively innocuous is still involved in an obscurity, which the light of chemistry has not yet been

enabled to dispel, whether it may be partly combining its proximate elements, some of their properties are neutralized by reason of their chemical relations or thus rendered the compound a more innocent substance, or whether by an alteration in the arrangement of the ultimate atoms of which the proximate principles are composed, the properties of the several constituents may not be so changed, as to give a compound of comparatively harmless character — The purposes subserved by the bile in the animal economy may be considered in a twofold aspect — First, as an excrementitious substance derived from the disintegration of the tissues, engaged in their appropriate functions, or from the decomposition of the elements of the blood.

serving in this way, to eliminate from the system the hydrocarbonaceous portion of the effete matters. The nitrogenous product of decomposition being eliminated by the kidneys. It is stated by Liebig, that if you add half the formula representing the composition of bile, to the formula of the urea or ammonia case of the constituents of urine, the sum will give the proportionals of the ultimate components of flesh or of dried blood.

That the bile is an excrementitious product, is inferred from its existence in the intestines of the foetus, in greater abundance, just before & at birth, than at any subsequent period at which time, during gestation, there is no action on the part of the organs of digestion & respiration, & there can be no necessity for its secretion to minister to either of these.

but are first on the birth of child that so soon as the functions of these organs are called into action, the bile which had collected in the intestinal canal, is now voided as the first excrement or what is termed the meconium, without having performed any office in the process of digestion. So soon as respiration is begun the bile which is there secreted ceases to be evacuated as before, but is reabsorbed into the circulation, where its carbon & hydrogen are oxydized to form carbonic acid & water, which are got rid of through the lungs. The sulphur & soda, which it contains, are also oxydized, & eliminated by the Kidneys

In the next place, the bile presents itself for consideration, as a recrementitious substance

That it performs a very important office in the process of digestion, is evident beyond

the possibility of a doubt. The outlet of the hepatic organs, throughout the animal kingdom, lies in that part of the digestive apparatus where digestion is going on with the greatest energy. The process of secretion is continually being carried on, but the product is received into the alimentary canal only, where it is wanted to aid in the digestion of food recently taken into the stomach. Besides, it has been found by experiments on dogs, that if the hepatic duct be divided, so as to cut off the communication between the liver & Duodenum, the animal will not long continue to exhibit its wonted healthfulness of digestion, but will die in a short time, with all the appearances of inanition.

But if the animal be allowed to lick up the bile, as it flows from the orifice which has been made through its side, then digestion will go on, as though it had not

with no disturbance in any of the organs contributing to the process. It is generally conceded by physiologists, that the bile acts a conspicuous part in digestion. Its emulsifying property renders it an efficient agent in the preparation of the fatty materials of the food for absorption by the lacteal vessels. According to the experiments of H. Michel, it has the power to convert sugar into fat & to possess a solvent power over cassein.

It is an antiseptic agent, will arrest incipient fermentation & putrefaction.

Among the offices ascribed to the bile, may be mentioned its property of precipitating the faecal matter from the chyle, & of furnishing a natural, gentle purgative to the bowels. In illustration of the truth of the last named property, may be adduced the fact, that when there is a want of activity on the part of the liver to secrete its usual

amount of bile constipation is the most common result. but when there is an elevation of the function of that organ & an unusually large quantity of bile secreted diarrhoea is apt to supervene. That bile possesses active cathartic properties, we are justified in concluding, from the experiments of Dr. Rogers. In every case in which he administered it, he witnessed its ready action on the bowels. The cathartic property of ox gall has long been regarded as a settled fact of some interest. These facts are sufficient to suggest to our minds, that the different chalagogues, to render them cathartic, do not of necessity, possess the property of directly irritating the walls of the intestines & thus provoke them to an expulsion of their contents, but that, they may produce their effect, by first stimulating the liver to an unusual secretion of bile.

& then, this act as the true exciting agent in the production of cathartics –

4. Then, this act as the true exciting agent in the production of catharsis –

An Inaugural Dissertation on

Typhoid Fever

Submitted for Examination
to the
Faculty Provost & Regent
for the degree of Dr of Medicine
by
Thomas M. Laney from
Georgeville Indiana Co.
State of Pennsylvania

Typhoid Fever, Enteric Fever, Common
Continued Fever. This is a general febrile affection
attended either by a moderately sthenic or asthenic con-
dition of the system depending upon location condition
of the system at the time of attack or Epidemic con-
stitution of the atmosphere. Few diseases present a
greater variety of symptoms or assumes so many grades of
intensity yet sufficiently recognizable withal.
It is said to have no connection with miasmata in as
much as it in some would seem to prefer an opposite
condition of the atmosphere. It has been found to exist
in all parts of the United States where miasmatic diseases
do not prevail to a very great extent and even sometimes
where malarious influence is felt.
Very often this disease is found to prevail endemically
some neighborhoods suffering severely while others con-
tiguous are almost if not entirely exempt from the
disease. Neither are remote sections of the country exep-
t as hilly or mountainous regions for instance, some
the most fatal cases have occured in those highland
districts.
It may occur at any season of the year but is peculiar
to cold & variable weather. The character of the disease
varies also exceedingly While in one case we meet with
the disease so mild that but little therapeutic interfe-
rence is required others present themselves with the
most formidable aspect defying almost every effort that

made to combat the symptoms.
The disease sometimes begins abruptly with a chill follow-
by the usual symptoms of fever but as we find it
enough this counting generally the premonitory ...
somewhat mild slow & insidious in its progress
e patient at first complaining most generally of slight
ead ache & heaviness in the region of the forehead & Eyes
n other cases the pain of that region is quite severe.
eneral lassitude & weakness seizes the patient. Aching
the small of the back almost always complained of
metimes extending to the lower extremities. In fact patients
equently express themselves as if bruised all over. There is
ost always developed a nervous condition of the system
hich is peculiar to this disease. The skin is somewhat
eated & dry the face is flushed the pulse accelerated
he Tongue if examined will be found in most cases to be
ated with a very thin white fur. The appetite is most gener-
lly impaired though not quite Extinguished.
These symptoms continue with a gradually increased
tensity till most generally at the end of the first week
e disease takes on a more striking character. The patient
ow no longer feels able to go about but takes his bed. Previous
this time the patient frequently complained of chills
slight shiverings alternating with flushes of heat but
ow these varying symptoms settle down into a continued
orm. After this the chill seldom return except on the
ecurence of incidential inflamation.

[illegible] two inchoative [illegible] a great tendency to looseness of the bowels amounting frequently to Diarhoea or at least the bowels are very much disposed to become so after the 1st physic. Very probably on giving the 1st Cathartic it will continue its operation on the bowels [illegible] too long although not more than an ordinary dose has been given. & [illegible] almost characteristic of this disease is slight bleeding from the nose not enough to produce debility of itself but continuing to be rather a source of inconvenience than anything else. It frequently occurs during the setting in stage & sometimes continues more or less till the patient becomes quite low & prostrate.

The above symptoms continue with but little change [illegible] than a gradual increase for several days. The pulse becomes more frequent & less strong. The skin acquires more heat & aridity & [illegible] becomes so strongly marked in many case as to have received the peculiar name of Calor Mordax. There is dullness of expression and a dusky hue of the skin the tongue either remains slightly covered or coats itself over with a thicker fur & showing a tendency to dryness or clamminess often appearing red at the tip & edges. The stomach in this disease is most generally irritable though sometimes retentive. Diarhoea, transient pains in the abdomen with soreness on pressure in the Illiac Region are quite common symptoms. A Tympanitic condition of the bowels may be discovered & upon pressure with the hand

gurgling sound will be elicited. Very frequently
e patient becomes affected with a slight cough either
ry or connected with mucous Expectoration more or less.
e Urine also becomes scanty & high coloured in most
ses also attended with difficulty in voiding it. In some
ew cases however this latter symtom more commonly
ccurs latter in the disease.
About the 10th or 14th day after complete formation other
nt more severe symptoms set in. If the disease is
e prolonged the tongue becomes quite dry & puts
a brownish aspect. Deglutition becomes painful &
ifficult in some cases. The abdomen becomes more
more distended until the walls of that viscera presents
convex line from the ensiform cartilage to the pubes &
hen percussed sounds quite tympanitic. The surface of
e skin when examined minutely will be found to be
overed more or less thickly with small red spots like flea
ites & upon the neck & upper part of the chest will
detected small vesicles called sudamina.
here are strongly marked nervous symtoms such as roaring
hizzing of the ears with partial deafness. Delirium or
oma more or less urgent characterizes this stage of the
disease. In moderate cases there seems only a tendency
wandering of the mind, in other cases very frequently
rom the start there seems entire stupidity & utter
isregard to circumstances around or even his own
ondition. When interrogated respecting his condition

eps probably there is not much the matter, is better,
oing to get well &c When perhaps at the same time
is in imminent danger. Subsultus tendinum twitching
f the Muscles of the face are symptoms also which
ccur toward the termination of the disease.
Involuntary discharges from the bowels sometimes set in
Retention of the urine is also one of the almost constant
oncomitants in the latter stages of the more severe
ases. If the case is to end unfavorably the pulse gives
ay & becomes excessively frequent & fluttering or slow
& scarcely perceptable. The extremities become cold &
clammy and the whole surface is bathed in colliqua-
ive sweats.
When the case takes a favorable change the
ongue begins to moisten & part with its coat in reg-
lar order commencing at the tip & edges and
oing on gradually till the whole surface becomes
noist & of a natural appearance. The pulse lessens
n frequency & becomes more expansive. A cooler & more
elaxed condition of the skin, diminished thirst, deli-
rium & stupor subsides. The patient pays more attention
o surrounding objects, the abdominal distension also
diminishes. The evacuations from the bowels become
f healthier consistence. The stomach to regains its
normal function exhibited by the willingness on
the part of the patient to accept such aliments as
may be offered. Convalescence now goes on pretty rapidly

This disease does not always take the above favorable course, There is one circumstance which is peculiar to this disease. Frequently about the end of the 2d week or later the tongue after being much coated throws off its fur in flakes generally commencing in the middle leaving the surface dry smooth & red as if the papillary structure had been removed. This condition of the tongue may continue an indeffinite length of time. If the tongue becomes moist & does not coat over again convalescence may be expected pretty certainly but when the tongue cleans after this mode the patient is very apt to get along very tediously.

In making out the diagnosis of this disease Diarhoea may be said to be one of the 1st distinguishing marks commencing either before the fever or soon after. Very often after unloading the bowels with the 1st physic there may be no more than one two or three motions per day yet the stools are of a thin yellowish consistence or else water coloured but more generally as the disease advances the discharges become much more frequent & scanty & attended with slight tenesmus. One fact worthy of notice that purgative medicine cannot readily be borne in anything like an ordinary dose without exciting the bowels inordinately. It has been said that this fact should have considerable weight in

deciding upon the nature of the disease. Still in severe fevers the secretions from the bowels are much changed in this they often remain nearly natural with the exception of their thinness. Sometimes however they become black & bloody in the advanced stages. The diarrhoea is generally attended with pains in the abdomen which is not severe yet troublesome. ~~Tympanitis~~

Tympanitis. Rose colored Eruption & sometimes sudamina appear upon the surface of the body. Cough & Bronchial Rales are frequent in this disease, the cough being dry & sometimes attended with a slight mucous Expectoration.

Nervous symptoms are peculiarly prominent in this affection. Dullness or hebitude of mind is one of the most common symptoms, Delirium often occurs Hardness of hearing is also highly characteristic. Retention of urine is also a circumstance of considerable importance in the latter stage. This disease may be known from Billious fever by the latter having decided remissions & more regular ones than the former. There is also in Billious fever a great tendency to billious vomiting with yellowness of the skin, by its shorter duration & tendency to terminate in intermittent. In Billious fever there is not that tendency to diarrhoea & soreness of the bowels nor tympanitis - Ulceration of the Eliptical patches of Peyer. However it is often hard to decide upon the true nature of the disease at first sight

or even for several days in some cases.

The cause of this Malady is very uncertain. The circumstances of its production are very diversified. It is often generated in badly ventilated hospitals & prisons where many persons are crowded in dirty & small apartments with insufficient & unwholsome food & vitiated air. However it is by no means confined to such places alone for it will be found to exist in the country and Mountainous regions & sometimes even to prove fatally endemic in some neighborhoods. Cold & variable weather seem to favor its developement hence it is [illegible] to prevail during the change of Autumn to winter & during the cold of winter & spring.

Certain individuals are more predisposed to it than others. Young persons & those of middle age are said to be more liable than small children or aged persons. Those between the age of 10 & 30 seem to be more frequently the subjects of this disease however children & old persons do sometimes take on this form of fever.

Post Mortem examinations have almost invariably detected disease in the bowels sometimes slight but most generally of a serious nature. Ulceration of the Glands of Peyer is said to be the most common & constant phenomenon. In fact it has been said that there can be no Typhoid fever

hout inflammation & ulceration of these glands. That ulceration is an essential circumstance in the progress of this affection is I believe at present a generally received opinion. The Mesenteric glands are also found inflamed & ulcerated. Spleen has been found Enlarged & softened. The Colon is almost always distended with gas.

Prognosis, As the disease is found through our country generally may be considered favorable in a vast majority of cases. It is one of those diseases however that put on every degree of violence under different circumstances. It sometimes & in some places takes on a great-deal of fatality. There are frequent endemics in which a large proportion prove mortal or at least large considering its ordinary course & tendency. The grade of severity varies very much in different years. It is a disease which I believe shows the controlling influence of good treatment as much as any other disease although it is true the disease cannot be cut short or suddenly interupted in its progress but may be brot to a favorable issue when without treatment the patient would have died. No case should be looked upon as hopeless there is no case so low but what unfavorable circumstances of a peculiar nature may recover. It has been said that even where perforation of the coats of the intestine the patient has gotten well after a long time. It is only in

Fatigue, only that we should give up the patient.
Sometimes on the other hand patients who seem not to be so bad rather mild cases go on in spite of the best directed efforts until death ensues. Probably one of the worst symptoms is early prostration of the powers of life with great derangement of the mental faculties a constant motion on the part of the patient that he is from home with low muttering delirium or the other extreme of strong cerebral excitement.
In other bad cases where the prognosis might be considered very unfavorable is great tendency to hemorrhage from the bowels with sinking of the pulse with a colliquative condition of exhalent & secretory function of the skin & bowels, Great abdominal distension.

Subsultus tendinum extreme weakness & frequency of the pulse involuntary discharges either from the bowels or bladder, Profound coma stertorous respiration are all indicative of a fatal termination.
A favorable termination is known by a less frequent pulse at the same time more regular. A diminution in the heat of the skin. Return to consciousness an interest in surrounding objects. Restoration of the bowels to there natural function as well as the other secretions. The tongue becomes more moist & cleans from the tip & edges.
The younger the patient & the better his previous state of health the more favorable the prognosis.

Treatment. From what has been said in reference to the symptoms of the sickening stage it will be evident that active purgation would be very inappropriate. The bowels very frequently being rather disposed to diarrhoea from the outset & always very readily moved by moderate aperients. In some cases however it would be necessary to give a pretty decided agent such as a moderate dose of Calomel & Rhei or Blue Mass followed by Castor oil till the bowels are well emptied of their contents after which an occasional dose of the oil may be given every morning or every other morning as occasion may require. If pain exist in the bowels with much irritation the addition of 15 or 20 drops of Laudanum to the oil.
Throughout the complaint there should be great attention paid to the action of the bowels. The gentlest laxatives & those in small doses are the kind most adapted. Other symptoms are to be met as they become developed if strong reaction blood letting either general or local from 8 to 16 ounces might be taken from the arm according to the amount of danger from inflammation. However at best bleeding is a very uncertain agent & if carried a little too far very injurious. Refrigerant diaphoretics combined with the more strictly sedative agents are often very appropriate. Such for instance as the Sweet Spt. Nitre. Spiritus Mindereri. & Antimonial Wine. The disease has a tendency to run a certain course & the most that can be done is to keep the patient in as favorable a condition as

sible so that the disease may not be allowed to fall upon any of the vital organs producing inflammation or congestion of those parts. Refrigerants diaphoretics through the day with a Dovers powder at Bed time would be the general plan of treatment providing the patient should not rest well at night. Opium combined with Ipecac & sweet spt. Nitre in proportion of 1gr Opium 1 Ipecac & 25 to 30 drops of the Nitric Ether is an excellent prescription in those cases where there is much restlessness & wakefulness with heat & dryness of the skin.

Cold ablutions are also excellent adjuvants in this affection particularly where there is strong determination of blood to the head or great dryness of skin & pungent heat of the surface generally — Cold water should be diligently applied to the head where there is strong cerebral Excitement with determination to that organ. Pounded ice in bladders is much recommended to be kept on till sufficient Effect is produced. However care should be had not to place the circulation in that condition in which the patient would be liable to suffer from an opposite cause. It should be repeated frequently according to the violence of reaction. Tepid sponging over the surface generally when the skin is dry & hot is of the greatest utility & comfort. Frequently the palms of the hands & soles of the feet are found to be exceeding hot dry & hot the patient complaining of a not pungent burning sensation in those parts. In such

[illegible] are produced
from rolling, or parts with cold water. and in-
lieed attention to some of those apparently small
matters is of vast import both to the patients
comfort & security. Cold applied in this way often
seems to have a very moderating & calming influence
over the heart's action.
Another indication is to be met in the treatment
of this disease, soreness of the bowels. Exhibited by
tenderness on pressure over the umbilical & right
iliac regions. Cups or leeches may be applied over
the tender spot after which a large mush poultice
should be placed on the part & repeated as often
as they dry untill the symptoms abate or the necessity
for more urgent measures. Poultices with powdered
Mustard combined is also an excellent application
where a rubefacient Effect is required. [illegible]
in many cases the intestinal affection will go on
untill it becomes necessary to apply a blister over
the abdomen of Cantharides. Poultices are useful
in the earlier stage of the disease when blisters are
inadmissable from their general stimulating properties
However in the latter stages nothing seems to have
such a happily controling influence over the intestinal
affection as a well timed blister.
The diarrhoea which frequently attends this disease
may require attention When opium Acetate of Lead
& Ipecac [illegible] may be given in suitable doses. But
upon the whole if the discharges are not too

Exhausting they had better be let alone to run the course. If nervous symptoms show themselves such as restlessness jactitation wakefulness & slight delirium may be quieted by Hoffman's Anodyne Sweet spts. Nitre or Camphor water.

The above plan of treatment will probably meet in a large majority of circumstances all the indications However there is one condition which might be mentioned where there would be demanded quite a different course.

Some cases go on pretty fairly till the 2d week or the commencement of the 3d when they take a sudden change. The tongue becomes dry hard & brown & swollen with a general lack of most of the secretions particularly the urine saliva & perspiration. The abdomen becomes tympanitic the pulse though more frequent is not so strong as before. A general diminution of the vital powers is perceptable. In many of these cases the gentle effects of Mercury upon the system might be of advantage Blue Mass combined with Ipecac & Opium one gr of the former to one sixth of the latter has been recommended till a slight effect is shown upon the gums. When the tongue is dry hard & scabby with a want of vital action in the system the pulse being tolerably soft & weak with considerable stupor the oil of Turpentine given by itself or combined with sweet spt. Nitre

[illegible] Emulsion of Gum Arabic & Loaf Sugar will sometimes prove a most admirable remedy where all her means seem to fail. [illegible]
When symptoms of great prostration present themselves stimulants must be used pretty freely. Wine Whey Brandy & other stimulants may be used. Sulphuric Ether may be necessary where there is powerful prostration of the Nervous Energy.
There is one remedy which has been highly lauded in certain cases particularly where lesions have been suspected to exist in the Glands of Peyer, Nitrate of Silver in ¼ gr doses repeated 3 or 4 times a day combined or not with opium.
Sulphate of Copper has also been highly recommended.
Great attention to the diet is of the utmost importance in the progress of the disease. During the 1st stage very little of anything is required but slightly nutritious drinks or very thin Gruel. As the system becomes more prostrate it will be necessary to give more nourishing diet or that which will slightly stimulate. The diet must be selected with care to suit the circumstance in each individual case.

Thomas C. Murray, Surg.

An
Inaugural Dissertation
on
Dysentery
Submitted to the examination
of the
Provost, Regents
and
Faculty of Physic
of the
University of Maryland
For the degree of
Doctor of Medicine
by
Thomas E. Mitchell.
of
Maryland
1853

Gentlemen

As it is the custom to prepare an inaugural dissertation on some disease or subject connected with medicine, I now enter on the subject of dysentery, though, knowing myself incapable of doing it justice, I will endeavour (aided by the instructive lectures of our worthy professor of practice) to write a short dissertation on this disease.

Dysentery.

Dysentery is an affection of the mucous membrane of the large intestines, more especially of the Colon and rectum which is variously named by different authors, as colitis, colorectitis, and by others it is named Tormina from one of its leading symptoms, and it is vulgarly called flux or bloody flux according as the discharges are free from or mixed with blood; the discharges are generally frequent, accompanied with some griping pains, tenesmus and in a degree of fever. The stools are small consisting of mucous which is often mixed with blood.

When the evacuations are more natural they contain hardened lumps of feces which

are termed dysbala. In the malignant forms of the disease the inflammation sometimes extends as far up the alimentary canal as the small intestines. In mild forms of the disease may be preceded by diarrhoea or it may occur without this premonitory symptom. In some cases the first symptoms of the disease are pain in the bowels, followed by the mucous or muco-sanguinolent discharges characteristic of the disease. Occasionally it commences with a chill, followed by fever, or in moderate cases, (where the inflammation occupies but a small extent of the alimentary canal) it may run its course without the occurrence of fever but the severer forms are almost always attended with fever, a hard and frequent pulse, a warm and dry skin and a moist and furred tongue,

In these cases the biliary secretions are somewhat diminished. In many instances the patient experiences slight derangement of the stomach and bowels, indicated by flatulency, costiveness, nausea and occasional vomiting several days before attack, these symptoms however soon pass and the acrid secretions descend into the lower part of the alimentary canal, when the disease is fully formed the characteristic mucous or muco sanguinolent stools are passed frequently with an extreme degree of straining and tenesmus and feeling as if the bowels themselves were about to be discharged. These stools often occasion so intense a burning sensation about the anus as to lead the patient to dread their return and to resist them as long as possible. The first evacuations consist of

more or less feculent matter, after which they are very [illegible] consisting merely of a [illegible] or mucous mixed with blood and sometimes of almost pure blood, they have at first very little odour but after a short time they become very disagreeable and quite distinct from the feculent. There is more or less tenderness of the abdomen which will be increased upon pressure if the inflamation has extended far up the intestines. The appetite becomes diminished in the course of a few days and the articles of food which are taken into the stomach are passed by stool in an undigested state, the patient soon becomes emaciated and as the disease advances his bodily weakness increases, till at

[illegible] to [illegible]
[illegible] is [illegible]. The stools appear as if mixed with shreds of membrane and sometimes they are [illegible] like pure pus or continue to consist of mucous more or less tinged with blood. If the remedies employed fail to afford relief, the prostration becomes very great, the pulse weak, the tongue furred and brown or dry red and aphthous. The evacuations become dark and offensive, hiccough is also an unfavourable symptom. Death sometimes takes place in the course of two or three weeks or it may degenerate into the chronic form of the disease, the treatment of which which will cause a vast amount of trouble and anxiety.

Dysentery is often complicated with

other diseases such as intermittent and remittent, typhoid or typhus fever, it is sometimes complicated with disease of the liver, but not often met with except in warm climates. The affection of the bowels commencing in the form of diarhoea; the stools variously coloured, black, green, or deep yellow; they are preceded by considerable griping, felt principally about the umbilicus; they are, both accompanied by much flatus, and cause much scalding or excoriation about the anus. After a few days they become white and mucous with an occasional admixture of imperfectly digested aliment. Throughout the disease there is nausea, intense thirst, loss of appetite, yellow fur on the tongue, great oppression about the epigastrium & the pulse also is frequent - it is a

this disease lasting for weeks or months it produces great emaciation, sleep and often also vomiting. This form of dysentery which is sometimes called hepatic flux may terminate in health, in incurable disease of the bowels or in abscess of the liver.

(Dunglison)

Causes. The causes to which this disease are attributed are numerous. Some have attributed it to wet and cold, a moist warm atmosphere, cold combined with moisture and warm damp days succeeded by cold nights which are by far the most frequent causes.

Soldiers during the Mexican war were not unfrequently attacked dysentery. Marching during the day in the hot sun and becoming very warm and much fatigued lie down

to rest in the open air, immediately subjected to the influence of the cold and damp atmosphere of the night, the perspiration is immediately arrested and directed inwards, by which means, the hepatic secretion is arrested — likewise there is congestion of the portal circle. Dysentery has been ascribed to substances that act directly on the bowels, such as unripe fruits, ripe fruits in large quantities. Vegetables that are not easily digested Malt and alcoholic liquors as beer, cider, wines, porter, ale &c, putrid and acrid waters, drastic purgatives, the constant and exclusive of farinaceous diet acting in combination with the inclemency of the atmosphere where persons are crowded together — in close apartments; that are illventilated are not unfrequently the predisposing

Causes of Dysentery.

Malaria is supposed to be a cause of dysentery, and there is reason to think the supposition correct from the fact that the disease so often occurs in climates, seasons and situations most favorable to the production of periodic diseases such as Bilious and intermittent fevers and is occasionally combined with them. Many writers have believed the disease to be contagious, such was the opinion entertained several years ago, but at the present day we believe there is scarcely a medical writer who believes it to be contagious.

Pathalogical appearances,

Vary according to the stage of the case, and the period of death.

If dysentery prove fatal in the

early stage, there will be found inflamation of the mucous membrane of the large intestine, with very far based ulceration, this being confined principally to the more chronic forms of the disease.

In a more advanced period the bowels are found to participate in the disease, and we frequently find numerous small ulcers in the intestines. The inflamation is generally confined to the large intestines (the Colon and rectum more especially) but sometimes extends as far up as the small. The external appearance of the bowels in these cases is healthy, but on opening them we find the mucous membrane along the whole tract of colon and rectum and frequently small patches of the small intestines somewhat elevated above the healthy parts.

The inflamed portion is sometimes covered with a sanious or bloody secretion, which is scraped off and the part washed will be found to be ulcerated. False membrane is sometimes deposited on the mucous membrane of the bowels.

The mesenteric glands are often much enlarged, sometimes inflamed but more rarely suppurated, the corresponding portion of the intestine being usually the seat of a deep and extensive ulcer. The omentum occasionally adheres to these diseased glands forming a band by which a portion of the intestine may become strangulated and thus, cause the death of the patient.

The ulcerations of the large intestines are generally most numerous in in the cæcum and

upper portion of the colon.

The ileo-cecal valve had been found to be entirely destroyed by ulceration and the lower portion of the ileum forming an intussusception into the caecum and there becoming strangulated was caused death. Sometimes the strangulated portion of the ileum sloughs off after adhesion has taken place between the adjacent parts, and thereby maintain the continuity of the canal.

The last three or four inches of the ileum are generally studded with superficial ulcerations and have a rough appearance from the enlarged follicles and glandular bodies; with this exception, we rarely meet with any traces of disease in the small intestines of those who die of dysentery, and in those cases in which the dysenteric symptoms

occur too and the termination of

protracted fevers.

Prognosis. When the dis-

charges consist of blood from the beginning

the disease is more likely to be protracted

than when they are composed of

mucous or mucous mixed with

blood, though the loss of blood in

the early stages of dysentery is not

injurious but rather beneficial, because

it relows the congestion of the portal

vessels.

If the case is about to prove

fatal, the tongue becomes furred and

brown or dry, glazed, the discharges

from the bowels dark and offensive and

occasionally delirium, Death may

take place in the course of two or

three weeks or it may degenerate into

into a more chronic form which may

last for weeks or months, the danger

is always in proportion to the extent of the inflamation, if it not extended to any great distance and there is much tenderness along the tract of the colon indicating the extent of the inflamation, the prognosis will be rather unfavorable. If about to terminate favorably there will be a diminution of pain in the abdomen of tenderness, the stools become less frequent and more natural, leaving the patient with nothing more than a slight diarrhoea which soon ceases.

Treatment, the morbid conditions which point out the indications for treatment, may be divided into several classes, namely, inflamation extending along the alimentary canal, general irritated vascular excitement, torpor of the cutaneous exhalants,

and a very mind of the hepatic function.

The principal indications for remedying these pathalogical changes are to moderate the febrile reaction of the heart and arteries by which means we lessen the degree of inflamation; and to restore the action of the liver.

The first indication may generally be answered by bleeding, if the pulse be firm and quick, blood should be taken from the arm or if the pulse be feeble leeches may be applied along the tract of the colon followed by warm poultices and fomentations, a large bran or mush poultice over the abdomen will generally be very soothing to the patients feelings.

Purgatives

when administered with care are the most valuable means we possess in the treatment of this disease. The acrid secretions are always very irritating and if suffered to remain in the bowels cannot fail to increase the violence of the attack. For the removal of these irritating substances, we should employ the mildest laxatives throughout the whole course of the treatment. Some of the most active cathartics have been employed for evacuating the contents of the contents of the bowels but such treatment is rather injurious than simplicia, and to say, more it is pernicious.

The most valuable laxatives for removing these irritating substances from the bowels are — Rochelle Salts, Castor oil and Calomel. The Calomel should

diaphoretic to excite the cutaneous exhalants. After the bowels have been evacuated and the arterial excitement moderated (as indicated by the pulse) we may employ diaphoretics in combination with calomel with marked benefit. The Pulvis Ipecacuanha Comp is perhaps the best diaphoretic we possess in such cases.

℞ Pulv. Ipecac Comp grs xxx
Hydrarg Chlorid grs vj
Misce ft pulv vj

One to be taken every three or four hours.

℞ Acid Nitrici ʒj
Tinct Opii gtts xxx
Mistura camph ℥ viij

Make into a solution one fourth to be taken every four hours

3

For the chronic form of Dysentery Lead has been highly recommended in combination with Opium or Dover's powder, which is a combination of Opium & Ipecacuanha in equal parts.

℞ Plumbi Acetas grs x
Pulvis Doveri grs xx
Fiat in pilula V
One to be taken every three hours

During the whole course of the disease the diet should be of the mildest and least irritating character. Such articles as arrow root, farina, crackers and water, toast water &c. The patient may be allowed to suck small lumps of ice to allay the thirst which is often very distressing. He should be kept from the influence of cold & damp by wearing flannel next his skin. Care ~~and attention~~ should

Order to Prof. Mitchell for ventilation of his apartments,

Ulric Ena
[illegible]

Thomas E. Mitchell, of
Harford County
Maryland

A

Dissertation

on the Subject of Dysentery.

Submitted to the Faculty of Physic,

of the

University of Maryland,

For the degree of Doctor of Medicine,

at the Session

of

1852 and 53

By

Andrew Jackson Martin.

To

Samuel Chew M.D.

Professor of Theory and Practice of Medicine

in the University of Maryland,

Formerly Professor of Materia Medica,

As a

Mark of Gratitude,

for the many kindnesses rec^d from him

as a Physician, and teacher of medicine

these pages

are respectfully dedicated by his

pupil, ——

Jno^w G. Martin

Preface.

To the Hon. Provost Regents, and Faculty of Physic of the University of Maryland.

Gentlemen, Being a candidate for the degree of Doctor of Medicine, allow me to submit to your consideration, the following dissertation on the subject of dysentery, a subject I have chosen; not that I claim to possess any special knowledge of this particular disease; but because the laws of this, (as well as other medical schools) has made it requisite, that I with other candidates should lay before your body a thesis, on some subject connected with the science of Medicine; a science deserving the undivided attention of those who embark in its cause. I am aware that the following pages have their imperfections,

but hope when the inexperience of the writer is taken into consideration that but little will be expected of him who has not yet embarked in the practice of medicine.

Hoping the following pages may be accepted, and the writer may be among the elect, I am with great

Respect your humble
Servant, and Student,
A. Wharton.

February 14th 1853

Colitis or Dysentery

Dysentery is usually defined to be inflamation of the mucous membrane of the colon and rectum; characterized by griping pain in the abdomen frequent evacuations of mucous blood, or both at the same time, and tenesmus; the disease however does not pervade the whole track of the colon, but is generaly confined to the lower part, Inflamation of the colon when unaccompanied with the above phenomena, is known as enteritis.

But one of the symptoms named, can be considered peculiar to this disease, and that one may be allmost (if not quite) considered pathognomonic, I allude to tenesmus, which is a striking feature, and constitutes the principal means of diagnosis between dysentery, and its kindred disease; diarhoea. The other phenomena named all show themselves

in diarrhoea is in bad cases but not so marked in character as they do in dysentery, especially the discharges, which in diarrhoea are seldom mixed with blood and do not possess that fœtid odour which some writers say is peculiar to dysentery. We have in many cases previous to the above symptoms showing themselves, others, which are denominated premonitory symptoms; Among these may be mentioned a sense of general uneasiness, lassitude, anorexia, soreness in different parts of the body especially the abdomen, the bowels being either free or costive.

Following the general symptoms in one case, and coming on simultaneously in another, we have fever of greater or less severity, characterized by frequency of pulse, which is sometimes full and

strong. Stool, in bad cases, becomes very small and rapid. In these cases when there is much febrile disturbance, the skin is hot and dry, urine scanty and high colored tongue coated, and the secretion of bile generally diminished.

Each of the symptoms demand a special notice and are often so severe as to require special treatment. The pain in some cases is acute from the first, but generally commences as simple uneasiness in the abdomen, gradually amounting to pain of the most excruciating character, which seems at times to concentrate itself, in some measure, about the rectum, it is irregular and intermitting, and is partially relieved by an evacuation even though it be small and with returning desire to evacuate the bowels there is pain and

burning sensation about the rectum, This tenesmus is sometimes very distressing to the patient, and as I before remarked constitutes the most striking feature in the disease,

The discharges are at first more or less fecal, then become mucous in character, and mixed with blood, Sometimes pure blood is discharged but this is comparatively a favourable symptom as congestion of the membrane is relieved by such discharges. The discharges are generally small in quantity and frequently repeated in the course of a day; Sometimes to an allmost incredible number of times. We have in some cases at the first a discharge of hardened lumps of faeces termed scybala, this is however of uncommon occurence, The odour of the discharges

is very offensive and considered by some authors as peculiar to dysentery; at any rate it is different from the odor of peculent matter,

Sometimes there is frequent and difficult micturition, caused by the irritation from the rectum, being reflected on the bladder. The stomach sometimes sympathizes and nausea and vomiting occur, Thus we may have from the symptoms and changes, allready named a disease varying in severity; from one perfectly mild, in which nature would be able to accomplish perfect cure, up to one of the most obstinate, and dangerous diseases, the Practitioner may be called upon to treat, or the human frame to endure,

The disease occasionaly shows itself in an aggravated form from the onset,

so that the patient at once sinks under the violence of the impression made on the nervous system. In these cases the abdomen is tense and tender the skin cool and clamp, pulse though frequent is very feeble, the countenance bears an expression of anxiousness the features sunken there is a livid colour showing itself in different parts of the body as about the eyes, lips, finger nails &c, and these local symptoms continue to increase while life lasts, which is not long proving fatal in a short time.

Such cases occur during epidemics principaly. In ordinary cases of this disease, the closing symptoms are somewhat different; there is often sudden cessation of the tormina, and tenesmus, with the addition of other phenomena, as hiccough, delirium, subsultus tendinum,

palpitation &c, these with the disease lasting over ten or twelve days, may be considered as unfavorable omen, denoting the approach of a fatal termination.

Dysentery occuring in persons of good constitution, and uncomplicated with other affections, rarely proves fatal especially if proper treatment be employed early in the disease.

But when it occurs during epidemics, owing to the poisonous influence being exerted over the system, the prognosis is rendered more unfavourable. Occuring in the city it is more unfavourable than if it occur in the country, so indeed are most diseases, owing to the impurity of the atmosphere of the city. Occuring in constitutions, broken or enfeebled by other diseases or intemperance, it

often proves fatal. It will be seen that I have thus far confined my remarks to simple uncomplicated dysentery, other forms exist, as the bilious, typhous, adynamic, remittent and others; of these I shall not speak particularly, but merely allude to them as complications; the general indications for treatment being nearly the same in all cases; the symptoms require treatment as they occur, and modified according to severity.

The causes of dysentery are very various, and may be divided into predisposing and exciting. Among the predisposing the most prominent is long continued heat; this acts as such, by relaxing the surface of the body, and thus rendering it susceptible to cold and damp, the perspiration

is checked and excitement directed inwards; as an exciting cause heat acts by disordering the function of the liver giving us that form, known as Bilious dysentery. Any irritant substance taken into the stomach may act as an exciting cause, and among the most frequent are unripe fruit, or ripe fruit in too large quantity, (the last two being very common causes in children) any article difficult of digestion, putrid food or water, Exhalations from putrid animal matter. Drastic Cathartics sometimes act as exciting causes, and I have no doubt, that mild cases of the disease are sometimes aggravated by their injudicious use, Astringents given in diarrhoea before the bowels are cleansed, may act as causes of

dysentery by confining the virulent matters within the bowels and preventing them from being expelled. And for the same reason may agravate dysentery when allready commenced, or by stimulating the inflamed membrane, Numerous other causes might be named but the above will suffice.

By many (and that too by men of experience) dysentery is considered contagious; now this is adverse to my opinion; experience may change my views, but at present I cannot think it contagious, if it is; it is — certainly in a very slight degree.

The fact of its prevailing, often epidemically, has led many to the conclusion that it is contagious, now this might be owing to some exciting cause being present; thus; we have

epidemics of the disease following hot and dry summers, especially if followed by cold and wet autumns, again we have it making fearfull ravages in armys; where the men who are often poorly clad and fed, are compelled after a long fatiguing days march, to lie down in the open atmosphere, exposed to cold and damp, and the exciting causes of the disease, are thus brought to bear upon them; the disease is here generally the form known as adynamic dysentery, and is often very fatal, We have it again making its appearance largely in miasmatic districts, either preceding or accompanying the fevers peculiar to such districts,

We have it accompanying septhous fever, and this more than any

other circumstance, I believe has led to the conclusion of some that it is contagious. But pray is yet a mistake that the contagion of Typhous fever depends upon the dysentery which accompanies it. indeed I do not know that any one has attempted to prove it; Why then say the disease is contagious, because it is a complication of Typhous fever? And more than this, is the fact, that dysentery does not always accompany Typhous fever.

The disease in question (dysentery) regards neither age or sex but does I believe regard circumstances to some extent, prevailing more frequently and with more fatality, among the lower classes of people. This can be readily accounted for; such as I allude to may be found generally in narrow and

pitting streets of cities, and we pay no regard to ventilation or cleanliness; live in food poor in quality and scanty in quantity; they are thus exposed to the exciting causes. In this respect Dysentery closely resembles Cholera.

Dysentery is closely allied to diarrhoea, the two diseases often occurring alternately. We may have dysentery of the most obstinate character commencing as simple diarrhoea and vice versa.

Dysentery is one among the most frequent diseases the practitioner is called upon to treat, during the seasons of summer and fall of our climate, prevailing to a greater extent some years than others. It is often mistaken in its incipient stage for its kindred disease, diarrhoea, and might be attended with fatal —

consequences. It is most frequently made in popular practice, by the women who prescribe a little brandy and red pepper, or ginger tea, or something else of the kind, in every case of pain in the stomach, and frequent evacuations; their object being the removal of the uneasiness, without knowing anything of the cause, Inflamations are thus frequently lighted up, and those that existed are increased in severity. I do not desire to cast reflection on our old grandmother doctresses, allthough it must be said they sometimes do good, they also do much harm, Yet in the country, they seem to be a necessary evil, But the error I am convinced, does not rest with them alone, but is committed by the profession occasionaly, owing to a hasty or careless examination of the

case. In the language of Dr. Watson the first question the practitioner should ask himself when called for the 1st time to a case of disease should be; have I inflamation here to treat?; he should be prepared to meet it, in all its forms. This in my opinion becomes a very important question in diseases of the primæ viæ, where we cannot see the affected part, for if we fail to recognise inflamation when present the mistake may be fatal, yet cases are sometimes so masked as to puzzle the most experienced and carefull observer; The anatomical characters are such as characterize inflamation generally, viz redness and thickening of the membrane, which is not un-frequently ulcerated; the peritoneal coat is seldom involved; in the dysentery

of tropical climates the liver is frequently diseased. In the adynamic or malignant form gangrenous sloughs are often found.

A great variety of remedies have been employed in the treatment of dysentery. Different means have proved serviceable under different circumstances. The treatment must of course vary with the nature and violence of the disease.

The indications are, 1st to remove the cause of irritation, 2d to subdue inflamation and 3dly to relieve distressing symptoms. The constitution of the patient, or coexistence of other diseases should demand special attention from the practitioner.

In simple dysentery with but little febrile disturbance, the disease will often yield to an aperient combined with an opiate, one which I have

seen employed with good effect, is castor oil and tinct opii, the oil carrying off the offending matter, and the opii quieting the bowels, by its sedative influence; but in many cases much more active treatment is necessary. A question that here presents itself, is, as to whether bleeding is necessary; in many cases it is, but in many others it is not; and in the adynamic form, such as often occurs epidemically, bleeding would not only be useless, but positively injurious. The symptoms demanding its employment would be, great pain and tenderness of the abdomen, with febrile excitement and a strong pulse. The quantity must be governed by the pulse. One bleeding will generally be sufficient, but if the symptoms continue unabated, and the pulse firm, it may be necessary to repeat it, but to be usefull, it must be resorted to early, and in the advanced period, it may

be worse than useless. Local bleeding by means of leeches will often prove usefull for the relief of urgent symptoms, as in pain and tenderness of the abdomen, and applied around the anus, where tenesmus is distressing; Or they may be usefull where general bleeding would not be indicated.

Emetics have been highly recommended; and where the stomach is loaded with irritating ingesta, or acrid accumulations of any kind; they would be usefull. The indications for their use would be, nausea, eructations of bile or other matter, and frequent and ineffectual efforts to vomit. When the use of an emetic is indicated Ipicachuana is probably the best.

As the removal of irritation is one of the prominent indications, Cathartics are among the most efficient remedies to clean out the Alimentary Canal. In the

choice of a cathartic, we must be governed by the nature of the case; if the object be simply to evacuate the bowels, Castor oil would be among the best; but if the liver is involved, the hepatic circulation sluggish & secretion of bile interfered with (constituting what is known as Billious Dysentery) Calomel would be preferable; ten or fifteen grains, followed by a dose of Castor oil, after the bowels are thoroughly evacuated, and inflamation reduced, Calomel and opium should be given in small doses, as anodyne and alterative, a fourth grain of opium and half a grain to one grain of Calomel, may be given every hour or two untile the constitutional effect of the Mercury is manifest, or Calomel and Dovers powder may be given in combination, by which we would have a diaphoretic effect produced which is often

beneficial by determining circulation to the surface. Dr Oberly speaks highly of a combination of Asclepias Tuberosa gss ℞ Spicac. grs and Opium gr ¼, to be given every two or three hours. When using diaphoretics care should be had to keep the temperature of the apartment properly regulated, as the patient is obliged frequently to be up. When there is much nausea and vomiting the effervescing draught, would be preferable to the diaphoretics above named.

The third prominent indication, is the relief of urgent symptoms. Some of them, are at times very distressing, and require special attention. Where there is much pain and tenderness, sinapisms, warm poultices or flannel moistened with warm oil of turpentine, applied to the abdomen; or if these fail leeches may be applied if admissible. When tenesmus is severe

an enema of sixty drops of tincture of opium in a little starch mixture will often give relief; or two or three grains of opium in form of suppository. Where there is much hemorhage acetate of lead (if admissible) may be added to the opium and starch mixture. Leeches around the anus have been recommended. The attention that the vomiting requires, has been before noticed.

Many other remedies have been used, and still are used, in the treatment of Dysentery; in the use of which, the practitioner must be governed by the nature, and stage of the case, to which he may be called, but in a great many cases the above will be found sufficient; where there are complications, with the disease, they must of course be attended to.

Acetate of lead, has been highly

recommended in the treatment of Dysentery, and as it is partly sedative, it may be used at an earlier period, than other astringents; it may be given in the early period of a mild case, and in the latter periods of more acute cases, and in Chronic Dysentery, it is a valuable agent. In Chronic Dysentery, Sulphate of Copper, in small doses, combined with opium, is often highly useful. Nitrate of Silver has been highly spoken of, it is applicable to the same stages that the acetate of Lead is, and in violent tenesmus, an injection of five grains of the nitrate, to one ounce of water, will often produce a Sallutory effect; it will increase the tenesmus for a few minutes, but then relief follows; there is still another condition of things to which this agent is applic-

-cable, and that is, its local application to the little ulcers sometimes left in the lower part of the rectum, after attacks of Dysentery. Oil of Turpentine has been recommended by good authority, in the following condition of things occuring in the latter stages of Dysentery; the evacuations become rofy, Skin hot and dry pulse feeble and there is general depression; it is supposed to act in these cases as stimulant and alterative.

Besides the administration of drugs proper regimen should be instituted, the room, of the patient, should be properly ventilated, and kept pure and sweet by the removal of excremitious matter, and if needs be, some disinfecting agent may be used, the diet should be of some farinaceous substance, and generaly liquid, in the latter stage more nutritious

and stimulants will often be necessary, especialy in the adynamic or typhoid variety, and in the latter case their use will be required early in the disease. When they are called for, Carbonate of Ammonia, Wine whey, Oil of Turpentine are probably the best, the state of the particular case must govern us in the selection of either of them. After convalescence is established the return to solid food should be gradual, and moderate exercise, used at first, until strength has returned.

As a preventative; during epidemics the use of all irritating, and indigestible food should be avoided, and strict attention paid to cleanliness and ventilation.

A Dissertation
on the
Physiological and Pathological Relations
of
Uric Acid

Submitted to the examination
of the

Provost Regent and Faculty
of Physic of the Medical Department
of the University of Maryland
for the Degree
of Doctor of Medicine

By Reggie Beckler
of Baltimore
Maryland.

Physiological and Pathological Relations of Uric Acid.

In all vitalized animal bodies, the laws of Death and Decay are in constant operation, and the slightest muscular movement or the almost inappreciable operations of the mind all, involve more or less destruction of their respective structures. To repair this continual waste, Nature furnishes the material from two great sources the Animal and Vegetable Kingdoms, which though, differing essentially in their physical characteristics, are nevertheless proved by organic analysis to be intimately allied in their ultimate composition.

With the exception of those unorganised materials which the mineral world supplies, both the structure of animal and vegetable tissue is built up by the complex union of three or four elementary gaseous bodies, Carbon, Hydrogen, Oxygen and Nitrogen. The first of these predominates in the vegetable, and the latter in the animal Kingdom. True and philosophical indeed (but with certain qualifications) are the lines of the poet Schiller.

"Four elements
In me fein band
Give form to life
Build sea and Land"

It is evident from the anatomical construction of certain organs of man, that he was destined by Nature to obtain his food from both animal and vegetable substances, in other words,

to be omnivorous. But as every description of food previous to becoming assimilated must be reduced to a state proper for its assimilation, ie, Blood it is evident that the ultimate end of each is identical, animal food however, possessing already a composition analogous to the structures it is designed to supply is much more readily converted into a form suitable for its appropriation, than that of vegetable origin which being of a more complex nature requires a series of decompositions and recompositions before it can be sufficiently assimilated for the purposes of nutrition.

By the processes then of Digestion, those portions of the aliment which are suitable for the nourishment of the body are converted into a con-

-dition proper for their assimilation, and taken up by the absorbent vessels are conveyed into the general circulation.

In the metamorphosis which animal tissues undergo in the living body, we have many varied and complex substances formed, some of which being no longer subservient to the purposes of the animal economy are conveyed out of the system by proper depurating organs. As it is the function of the Lungs and Liver to free the system of Carbon, the skin of Lactic acid, Ammonia etc, so is it one of the functions of the kidneys to depurate the blood of nitrogenised matter which is no longer useful in the animal economy, and this is eliminated in the form of Urea and Uric acid, the proper stimuli of the kidneys. It is of the latter of

these two bodies, both in its physiological and pathological relations that I propose to make the subject of the present thesis.

Uric or Lithic acid ($C_{10} H_4 N_4 O_6$) is one of the conjugated acids, and occurs always in a small quantity in the Urine of healthy ~~men~~ men in the ratio of about eight grains in the twenty four hours, it is also found in the urinary secretion of the carnivorous mammalia, as well as in the excrement and urine of birds of both the carnivorous and herbivorous species. Guano which is now so highly prized by the farmer for its fertilizing properties is nothing more than the accumulated excrement of sea fowls. and in this, Uric acid occurs in abundance, and is the source of the Ammonia partly upon which

the fertilizing agency of guano depends.
In man the average amount of
uric acid secreted in a day is
about eight grains as before stated,
the nature of the food taken
influencing in a far less degree
the amount of this secretion than
of the Urea. Thus according to
Lehmans experiments instituted
on himself, the average amount
of this acid discharged by him
in the twenty four hours whilst living
on a mixed diet was 18.17gr.
whereas whilst living exclusively
on an animal and one strictly ve-
-getable diet, the respective amounts
were 22.64gr and 15.7. In the
following table taken from Dr
Golding Bird. Urinary Deposits (p 64)
we have also the amounts of Urea
voided by Lehman in the above

experiments and the ratio it bears to the Uric Acid

Diet	Quantity excreted in 24 hours of Uric Acid	Urea	Proportion of Uric acid to Urea
Exclusively Animal..	22.64 grs.	819.3	1 : 36.1
Mixed animal & vegetable	18.17..	500.5	1 : 27.5
Exclusively vegetable...	15.7..	346.5	1 : 22.
Food free from Nitrogen.	11.24	237.1	1 : 21.

These tables and results of Lehmans cannot ~~stand~~ serve as standards of comparison for the urine of others, as at the time they were conducted he was affected with softening in one of his lungs, and he shall presently see that almost invariably, af-

-fections of the pulmonary tissue modify the amount of sediment in the urinary secretion and always that of the Urates.

It has been supposed by some that a greater or less activity of the Skin does in a measure replace the functions of the Kidneys, so that the amount of Uric Acid excreted varies accordingly, and that in winter when the secretion of the Kidneys is greater that the amount of Uric Acid eliminated is also greater than in summer when owing to the large amount of cu-taneous transpiration the secretion of fluid by the renal organs is diminished. But M Chultzen found that in Holland when owing to the humid condition of the Atmosphere the free

action of the skin is somewhat impeded that this result did not follow. From a series of observations he ascertained that the amount of Uric Acid passed in the 24 hours by healthy men varied from .32 to 1.04gm. It might be supposed that the relation which the above amount of Uric Acid voided in 24 hours by healthy men as compared with that generally passed might have some bearing upon the occurrence or non occurrence of gravel and stone among those people, but on the contrary Shulbens found that those disorders arising from an accumulation of Uric Acid in the system were of rare occurrence. Taking into consideration however those disorders in which we find the amount of Uric Acid increased

both relatively and absolutely, we shall see that they are nearly all dependant upon derangement in the organs of assimilation produced by excesses in Eating, and drinking alcoholic drinks. The amount of azotized food consumed being generally more than is required to supply the waste of the analogous tissues of the body, the surplus is excreted almost entirely by the kidneys. By this continual overstimulation the function of these organs becomes impaired and is no longer performed in the proper manner, consequently those substances which it is their office to eliminate from the blood accumulate in the circulation, and give rise to various pathological conditions.
In addition to faulty excretion on the part of the kidneys there is an other circumstance which augments the amount

of Uric acid in the circulation but only relatively. I allude to some temporary disturbance of the digestive organs produced by taking food and alcoholic drink, before retiring to bed, the morning urine generally contains a considerable deficit of a salt of Uric Acid. The uric acid in this case is produced mainly at the expense of the urea and of the other solid constituents, for normally the ratio that uric acid bears to the Urea ~~[illegible]~~ is as 1:28 to 30, while in urine passed after indigestion, the ratio is about 1:23 to 26, and the ratio of Uric acid to the other solid constituents which is ordinarily about 1:,60 was reduced from 1:41:,52, so that the amount of uric acid is not only increased at the expense of the urea but also at that of the other solid constituents of the Urine. It follows from this that those persons who are

addicted to the pleasures of the table are independently of other causes laying up the foundation of a gouty diathesis, and we learn also the indirect bearing which this augmentation of Uric acid from faulty process of assimilation has upon the presence of Oxalate of Lime in the blood. Thus.

		C.	H	N	O	
1 at Uric Acid	=	10.	4	4	6	
4 " water	=		4		4	
3 " oxygen	=				3	
		10 "	8 "	4 ·	13	=

	C.	H	N	O	
	4	8	4	4	= 2 at Urea
	6			9	= 3 at Malic Acid
	10 "	8 "	4 ·	13	

I have often observed crystals of Uric acid whilst examining the urine of persons labouring under Oxaluria so as almost to be led to believe that the two disordered conditions are always associated.

The unlike symptoms which are designated as fevers are all accom

panied with a greater or less augmentation of Uric acid in the system, which appears in the urine either deposited or dissolved hence the lateritious deposits which occur in these cases. There has been much dispute as to the composition of this sediment Dr Reid considers it to be Urate Ammonia, it has been fully demonstrated however both by chemical and microscopical tests to be a mixture of Urate of Lime and Urate of Soda. Heat rapidly destroys this sediment as both these salts are soluble at a temperature of 50°.

According to Berzelius there are a very few solutions of the alkaline salts by which Uric acid is not rendered soluble, but this is not applicable in every case as Uric acid appears in the urine as Uric acid and not as an acid alkali salt. The insolubility of Uric acid and not its salts in water and for the most

part in the acids accounts for the crystalline deposit of this acid in the urine of those labouring under the Uric acid diathesis. It doesnot follow because of the acidity of any fluid containing uric acid that it depends upon the presence of this acid. The alkaline lactates and the alkali salts of the organic acids are all decomposed by uric acid and thus liberated produce an acid reaction, or the acid salt formed also imparts an acid reaction, and in regard to this point Liebig says in his organic chemistry. "In the flesh, blood and other parts of animals, as well as in the grain of cereal and leguminous plants no free alkali exists. The alkali which these substances contain is invariably combined with phosphoric acid, the acids formed in the vital process viz Sulphuric-Hippuric and Uric acid share the alkali among them, and this of course

must give rise to the liberation of a certain amount of the acid phosphates of Soda and Lime and Magnesia. The proportional amount of phosphoric acid liberated varies with the temperature: at a higher temperature the phosphate of Soda dissolves a larger amount of Uric and hippuric acids than at a lower. It is owing to this that Urine sometimes on refrigeration deposits Uric acid or Urate of Soda which of course can only take place by the Uric acid at a lower temperature restoring to the phosphoric acid, the Soda and potash which at a higher temperature it had withdrawn from it. At the common temperatures phosphoric acid decomposes Urate of Soda whilst at a higher temperature uric acid decomposes phosphates of Soda. When urine containing Uric acid and manifesting an acid reaction forms no sediment on cooling it shows that the amount of Uric and Phosphoric acids first

balance each other in regard to their affinity for Soda. Had there been a larger proportion of Uric acid it would have separated on cooling, while on the other hand the presence of a proportionately proportion of phosphoric acid would likewise have caused a precipitation of Uric acid because the affinity of the former for Soda would then exceed that of the latter."

I do not think that the amorphous deposit of Urate of Soda which Dr Prout insists as being dependant upon pathological conditions is of much importance, its presence is due merely to an augmentation of a salt normally existing in the urine produced by purely physiological changes. If the necessary interchange of gases in the lungs does not take place, and the proper arterialisation of the blood prevented, or if from any cause the pulmonary circulation is impeded as for instance in tubercular degeneration of the lung tissue, the urine will of necessity contain a sediment

Thus sediments occur in the urine of both man and beast when insufficient exercise is taken, and in fact, it has been noticed that carnivorous mammalia which naturally secrete but a small portion of Uric acid, according to Lehmann have their urine after long confinement in cages loaded with a sediment consisting almost entirely of Urates, and this in conjunction with a disease to which these animals are very prone, viz osteomalachia or softening of the osseous tissue dependant on absorption of the earthy constituents. In pulmonary emphysema when the usual elasticity of the lung tissue has become impaired; in cardiac diseases, and hypertrophied liver, the urine is found always to contain a sediment rich in Uric acid. It is however only in true granular degeneration of the Liver, that we find very large quantities of Uric acid in the urine. In fevers the increased amount of Uric

I have lately understood that Dr Bird has in the last edition of his work corrected his statement in reference to this point, and says that the amount of Uric acid is diminished in the urine but increased in the blood.

acid in the blood is not dependant as Liebig supposes upon an increased oxidation of azotised tissue, but results from the balance between the circulatory and respiratory apparatus being no longer in due relation to each other.

Dr Golding Bird* and many others with him maintain that the disease Gout is attended with an increased secretion of Uric acid. It has been ascertained however by carefully conducted observations that there is a constant diminution of Uric acid in the urine voided previous to an attack of acute and always in chronic gout. But in acute articular rheumatism on the contrary the amount is much increased. Wolf has found Uric acid in the sweat of arthritic patients. Repeated attempts however to detect its presence in that secretion by other investigators have

failed.

The particular morbid conditions however which pathologists have contented themselves explaining by referring their cause to an abnormal increase of Uric acid in the blood are Gout and Rheumatism. The distinction between these two diseases, has never been clearly pointed out by Pathologists, while according to pathologico anatomical investigations, the group of symptoms which have generally been regarded as characteristic of the former of these diseases, may yield very different results in reference to alterations of tissue as revealed by dissection. In both young and old, we meet with diseased conditions of the osseous system, as for instance, osteomalachia an affection in which the bones become poorer in their earthy constituents, and more flexible than natural, or sometimes osteoporosis where resorption of both the cartilage and bone earth has

resulted from an attack of gout or a gouty constitution. But the opinion of the disease cannot depend upon this assumption, as the same bone is sometimes affected with Sclerosis and Porosis; the change which the bone undergoes is more dependant upon the nature of the exudation thrown out, if it be very consistent, it supplies the part of callus deposits an excess of bone earth and the affected part becomes sclerotic, if on the contrary, it is liquid, resorption occurs and the result is osteoporosis; if it becomes decomposed and ichorous, caries and Pyemia may ensue. These alterations in the osseous system however, are not solely the results of gout, but may occur from purely local causes and from other diseases as for instance Syphilis. Thus we see, the impossibility of fixing on starting point in investigating the pathology of Gout from the diseased condition in which we find the osseous system, as for the conditions which

as found in the joints, these may exist independently of gout, and the only one characteristic of the nature of Gout is the urate of Soda which rarely if ever occurs. The accumulation of Uric acid in the system is devoid of importance, for according to Dr Garrod it always takes place in Bright's disease of the kidneys.

So far then, as the pathology of Gout is concerned we still remain in ignorance of its nature, and if by any chance its pathology is ever elucidated by physiologico-chemical research it will be by examining the relation which the blood and Urine hold to certain diseases of the bones, more particularly to that disease known as softening.

Having in the foregoing pages spoken of those physiological and pathological conditions of the system to which respectively the formation of Uric acid and its presence in the Urine are due.
I have endeavoured in the accompanying diagrams to give as well as possible some of its characteristic crystalline forms as shown by the microscope.
I have also added some of the crystals of the Ammoniaco-Magnesian phosphates and of Oxalate of Lime in order that the distinction between them and Uric acid may be clearly pointed out.
So far as the ordinary forms in which these salts are generally met with, there is little risk in being mistaken in the distinction between them, but as it sometimes

happens that we are delayed in making our examination of any specimen of uric acid that we find that the crystalline form usually belonging to these salts has undergone important changes.

In plate 1 figs 1, 2 and 3 the characteristic forms of uric acid are shown.
In plate 11 figs 1 ~~and 2~~ Prismatic crystals of the triple phosphate.
Fig 2 of same plate an exposed view of the octohedral crystals of Oxalate of Lime, mixed with the dumbell crystals of the same salt.
In fig 4 of plate 1 we see the dumbell form which uric acid occasionally assumes. and in figs 3 and 4 of plate 2 are ~~the~~ shown ~~the~~ dumbell crystals of the triple phosphate and Urate of ~~Soda~~ Ammonia.

The History of Seven Cases

"Submitted as an
Inaugural Dissertation"
to the examination of the
Provost Regents
and
Faculty of Physic
of the
University of Maryland
for the Degree of
Doctor of Medicine
by
Edwin R. Sidings
of
Maryland

To

George W. Mittenberger

Professor of Materia Medica, Pathology, and

late Demonstrator of Anatomy

as a mark of respect for his

High Standing as a Teacher

and as an

acknowledgement for the many useful

lessons received from him.

This Report

is respectfully

Inscribed:

by his Pupil

The Author.

I am now called upon by a candidate for the degree of Doctor of Medicine to submit an original essay or clinical report to the examination of your honorable body.

It would be a difficult task indeed to find a candidate competent to add anything more on already well tilled Nosology. I shall not attempt anything of the kind; neither shall I do more than to draw from your admirable collection of rare & peculiar cases to offer.

I am satisfied that a clinical report would be more original, more instructive and more acceptable to you than any dissertation. I would, therefore, ask your consideration.

The present report con-

sists [illegible] and not
may notice in the words of the "Balti-
more Sun" during the past
summer & winter. I feel bound
to state of this observing, I am
only pointing out and the theori-
zing speculating, but in a cause
of humanity. I study with the
results with a common mind, with
candor — I search truth in
error, and deduce sound facts
from the numerous Hypothesis of
the present day.

I now submit them to
you, hoping they will meet with
your kind approval.

Edwin W. Widings.

Epilepsy.

Treated by Prof. Thomas.

Samuel Hall. – Admit. May 20th. 1848. Native of Scotland – some years in this country – Mariner, then Baker by trade – habitual drinker last summer while under the influence of liquor had an attack of delirium tremens. "Fits" was traced in the Baker. Drinking for a week [illegible] he still [illegible] has been a sober man ever since up to a few days ago when he resumed his old habits was drinking yesterday [illegible] this morning early had fever up to 5 [illegible]. Admit. [illegible] [illegible] – [illegible] under it, [illegible] it is [illegible] of liquor [illegible] pulse 140 – flushed countenance – some [illegible] [illegible] to be [illegible]

fell asleep in a few minutes — slept
for a short time — was attacked
with epileptic paroxysm. ordered
an injection of [illegible] to
be repeated if [illegible] given
[illegible] nape of neck — Calomel gr v —
rub to head & sinapism to [illegible]
Had another paroxysm & fell into a
stupor but soon roused again. — gave
him another injection of salt & water
Calomel gr v — it operated very freely
in about ten minutes. he fell into
another stupor but soon roused up, in
an open state of sickness & stupor,
vomited a little blood & then
he again fell asleep & passed
away. — about 10 o'clock he had
another epileptic paroxysm which
lasted for [illegible] minutes. It commen-
ced with a slight convulsion lasti-

[illegible] convulsions and the muscles of
[illegible] were affected with rigidity
[illegible] the right side was also
with great violence. The right side
was more affected than the left —
hand twisted towards the right
side as by a great distortion
eyes fixed with a rigid stare — eyelids
half open, pupils contracted and
immovable — two thirds and of a
livid hue — veins of the neck very
much swollen — saliva dribbling
forward at the mouth — pulse irregular
after the fits of convulsions
consciousness gradually returned,
though at first accompanied with
deep contusion, rising upon his bed and
looking about him with an astonished
stupefied air, [illegible]

[illegible] of intense pain in the stomach. at 12 o'clock vomited again about half a pint of fluids of the appearance [illegible]. applied a blister 4×8 over epigastrium. – passed his time in extremity in bed. at 1 o'clock had a large [illegible] from the bowels. at 2 o'clock vomited a pint [illegible] again. at 4 o'clock, to bed had a slight chill which lasted [illegible] minutes. at 8 o'clock vomited again shortly after [illegible] and did very well.

May 21st. Prof. Thomas saw him. he complained of pain in the stomach and head. Ordered 4 cups over stomach and

℞ Magnesia [illegible] ℥ij [illegible] ℥ij
Hydrocyanic acid [illegible] ℥iv M.

[illegible]

[illegible] towards night [illegible]

[illegible] and [illegible] [illegible]

[illegible] to a small room alone [illegible]

[illegible] at intervals.

[illegible] this morning

[illegible] restless [illegible]

the [illegible]. [illegible] continued [illegible]

of [illegible] day [illegible] to add [illegible] [illegible]

to each dose. [illegible]

furious again, haunted with ex-

travagant ideas and spectral

illusions & continued so all day,

at 10 P.M. fell into a sound sleep-

but this continued [illegible]

for [illegible] 10 [illegible] minutes — partial [illegible]

sis of right side — through the night was

very restless.

[illegible] 23rd. About day-break fell into a deep coma. [illegible]

[illegible] and [illegible] in the [illegible] [illegible] which [illegible] [illegible] completely [illegible] in the [illegible] extremities cold. He [illegible] in this condition of coma and died about 8 o'clock P.M.

The friends of the patient would not allow a post-mortem examination.

Bright's Disease.

Treated by

[illegible]

[illegible] — a native of the state [illegible] Pennsylvania, for the last [illegible] was a resident of Maryland and living in a [illegible] in the district — states he was [illegible] years of age, married and that his occupation is that of a [illegible] — he also says he has had [illegible] fever for eighteen months previous to [illegible]

[illegible]

[illegible] states that several weeks since [illegible] to rest as usual — when he arose in the morning he found his legs swollen, which abated after exercise; a few weeks afterwards his feet, legs &

[illegible] began to swell at night, and [illegible]
[illegible] that side of his face larger upon
[illegible] the last two
months his abdomen has been swollen
[illegible] since [illegible]
[illegible] has [illegible] had pain in the back —
appetite and strength always good
[illegible] headed [illegible]

[illegible] condition as [illegible]
[illegible]: Circulation & respiration
[illegible] — appetite good — no pain —
urine which has been usually abun-
dant, is [illegible] scanty, and deposits
a sediment on standing — bowels
[illegible]
difficult to [illegible] on pressure. — as diuretic
[illegible] administered.
[illegible] Pat. Body [illegible] the
[illegible], [illegible] additional symptoms

[illegible] times. Ordered
[illegible] relief in 4 hours if
[illegible]
[illegible] found to contain an
[illegible] of [illegible].
[illegible] bowels were [illegible]
[illegible]. Ordered 4 cups over region
[illegible] and [illegible] gij
in a pint of water and there [illegible]
to be taken as a dose, viz.

℞ Mass Hydrarg. grij
Pulv. Scillæ grij
Ext. Digitalis grij M. ft.
Pilj. to be taken every night.

[illegible] 6th. [illegible] much [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] 7th. [illegible] bowels [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]

dant precipitate with nitric acid. — Has
[illegible]
[illegible]
[illegible]
[illegible] 8th. Feels no uneasiness whatever,
has still decreasing quantity
of urine in five hours. Medicines agree
well and [illegible] as usual.

Afternoon — his legs are always
larger towards the close of day, than
in the morning — this evening larger
than they have been [illegible] accordingly
swell the buttocks.

[illegible] 9th. Did not sleep as well last night
as usual. — appetite good — bowels not
moved yesterday. [illegible]
[illegible] give him a drink [illegible]
[illegible] through the day, and the
Simile pill at night.

[illegible] 10th. Urine diminished — feels no
[illegible]. [illegible] pains in his loins,

[illegible]

natural. [illegible]

[illegible] ℥ii ℥i

[illegible]

iv – 8. One night and two morning.

[illegible]

[illegible] – [illegible] – [illegible]

[illegible] in his lower extremities where

[illegible]

[illegible] [illegible]

[illegible] according to the effect. ℞

Acetate Potassæ ℥vi

Tinct. Cantharidis ℥ij.

Aqua ℥iv

Vinch. Digitalis ℥ij ℞℞.

[illegible] 3 times daily. – the blood

[illegible]

with an abundant of serum.

[illegible] 19th. [illegible]

[illegible] – [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] pulse regular & soft, little dyspnœa
[illegible] in the evening — bowels open five
times yesterday — quantity of urine increased
[illegible] of a more healthy color — [illegible]
in size and wears more healthy aspect —
[illegible] 15 P.
[illegible]
state of the [illegible] regimen
with which [illegible]
[illegible]

[illegible] the [illegible] a [illegible]
[illegible] the [illegible]. [illegible]
[illegible]
[illegible]
[illegible] in addition [illegible] half [illegible]
of Digitalis three times daily.
[illegible], [illegible] digitalis will [illegible] – [illegible]
[illegible] cough – other respects the same.
[illegible] to be [illegible] [illegible] the [illegible]
[illegible] urine [illegible] [illegible] thought not
to contain so much albumen.
Nov. 29th. Without any obvious cause
had yesterday [illegible] with griping
in the bowels which had [illegible] the
[illegible] the offensive [illegible]
to [illegible].

℞ Sp. Nit. Dulcis ℥ij
Pulv. Scillæ ʒi M.

A teaspoonful 3 times daily with Cream

[illegible].
July [illegible]. Diarrhoea still continues – face
begins to look more natural – urine not
changed – weighed to day & found a decrease
of 6 lbs. [illegible] [illegible]. [illegible]
July 3rd. Bowels loose – had seven evacuations
during last 24 hours – fever abated, better –
pulse quick & irregular. Ordered to omit
all previous treatment & drink Broom
tea through the day.
July 7th. Lost 4 lbs. during the last six
days – urine less in quantity – diarrhoea
better. – Continue treatment.
July 13th. Feels much better. Bowels
nearly regular – general health improved. –
Ordered to drink Alum Springs water
[illegible] three times a day & contin. Broom tea.
July 18th. Was taken during last night
with [illegible] pains in the bowels, brought
on no doubt by going to market & sitting,

[illegible] — but
[illegible]
[illegible] to get
[illegible]. [illegible] treat. to be
[illegible] and [illegible].

℞ [illegible] ℥ss.
[illegible] gtt iij
[illegible] ℥iij M.

[illegible]

July 19th. [illegible] consisting
[illegible], large & mixed with blood. — a
[illegible] of [illegible] [illegible]
[illegible] — [illegible]
[illegible]. [illegible] to the amount of
℥vj and continue treat.

July 20th. Bowels in better condition con-
dition — pulse frequent. Order. Cit Potash ʒij
Aqua ℥v
Syp. Rub. Dulcis ℥iss M.

[illegible]

[illegible] 21st. Bowels still a little loose — will [illegible]

[illegible]

℞ Citras Potassæ ℥ij

Extract [illegible] gr vj

Pulv. Acaciæ

[illegible] ana ℥ss

Aqua Camphoræ ℥vj M.

[illegible] — Anasarca much less. [illegible] Tinct Opii gtts lx as an injection [illegible] bowels should be troublesome — was seen by Prof. Thomson today in the absence of Dr. Wharton. Ordered.

℞ [illegible] ℥ij

Succ Acaciæ ℥ij

Vini Opii ℥ss.

Tinct Rhei Aro. ℥ij

[illegible] gtt iij th.

[illegible] repeated every 8 hours until full [illegible] [illegible], after which give [illegible] Opii Camphor. ℥j after each evacuation.

[illegible] 27th. [illegible] loose — no tenesmus — no blood — [illegible] otherwise the same.

[illegible] Tab. Opii gr. ij

Acetas Plumbi gr. x vi Aqua [illegible] viij

[illegible] every 8 hours until the diarrhoea is [illegible] — [illegible] injection.

Oct. 28th. Medicines of yesterday acted well not requiring the iodine injection. [illegible] dis.

Oct. 30th. [illegible] feeling of [illegible] tables tea again.

Oct. 6th. [illegible] perceptible in [illegible]

[illegible] decreased [illegible] — [illegible] regular — passes large quantity of urine — [illegible]. Continue treatment.

[illegible] 5th. No marked improvement for [illegible] recovery. — become [illegible] and left the house this morning.

[illegible] visited the [illegible] day, looking certainly as well as I ever saw him. He says: after he left [illegible] went down the bay to his old business and for some weeks comparatively well; but he was obliged to [illegible] some time; then his old disease [illegible] equal to [illegible] obtained a Examination to the "Washington Hospital" [illegible] successfully. By [illegible] he furnished us with a bottle of his urine which on being tested gave evidence of albuminuria [illegible]

December 7th. [illegible] was made a liberal
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
his usual imperceptibly manner & suffered
the same disastrous consequences, viz:
his face was not much bloated & pale —
his [illegible] & [illegible] [illegible] — he
complained of feeling [illegible] suffered
from headache occasionally — impaired
appetite [illegible] [illegible] [illegible]
[illegible], tongue [illegible] of an am-
moniacal odour. — abdomen was largely
distended [illegible] breathing difficult [illegible] a
[illegible] — extremities [illegible] to a great
extent — pulse weaker 84 per minute easily
compressible — [illegible] [illegible] [illegible]
[illegible] exceedingly.
Dec. 8th. This condition [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] and

[illegible]

[illegible]

[illegible] Ordered to take the same dose [illegible] [illegible] effect & if possible have a violent check [illegible] [illegible].

Jan. 10th. [illegible] [illegible] [illegible] discharge [illegible] [illegible] his condition not worse, if not better. Contin. treat.

Jan 11th. Does not [illegible] [illegible] appears to be [illegible] [illegible] [illegible] [illegible] — [illegible] [illegible] through the kidneys [illegible] [illegible] the bowels freely open, the effusion does not seem to diminish [illegible] [illegible] [illegible] [illegible] [illegible]. Ordered Brown Mix. [illegible] every 4 hours & contin. treat.

Dec 13th. [illegible] Dropsy & tendency to [illegible] fever. — convulsions manifest by [illegible] & stupor in [illegible]. [illegible] with this mixture & give Syr. Iodide Iron gtts XV [illegible].

Dec 14th. Pt still continues [illegible] no [illegible] to-day [illegible] gtts. in the morning. at 10 P.M. as he complains of pain in a tooth [illegible] tendency towards Coma, & fearing any injury of the brain or effusion thereon, as much purgative of Croton & Castor Oils was given with the effect of producing three [illegible] evacuations.

Dec 15th. Pt. [illegible] this morning [illegible] violent convulsions — Sinapisms were applied to lower extremities & over the abdomen — an injection of Salt & water containing Turkentine — Cupes were

[illegible] 4 p.m. 6 weeks & afterwards 6 or 8 oz.

[illegible]

[illegible] of most [illegible] shewing [illegible]

[illegible] [illegible] [illegible]

[illegible] — [illegible] — [illegible] — [illegible] —

[illegible] — [illegible] — [illegible] — tongue coated

with a dark fur, dry & swollen — lips

[illegible] and cracked — features dis-

figured by an immense accumulation

of water effecting those of the right

side on which he always laid —

pupils dilated — immediately after

the convulsions a great degree of

stupidness shewn during & after

the stupor [illegible] 18th [illegible] [illegible]

[illegible] — after the fits of stupor, on

[illegible] became regular slow (80 to 84) &

[illegible] as it remained almost to death.

Blister was applied at 10 A.M. to his

[illegible] off in [illegible] and
[illegible] in the [illegible] [illegible]
large effusions beneath the cuticle.—
this appears to be [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] —
[illegible] [illegible] [illegible] —
[illegible] [illegible] says: "very well."
Dec 16th. Remains in a dark the same
condition.— hardly sleeps & slumbers
heavily continually — has eaten nothing,
[illegible] drinks when it is poured
down his throat — no passage in the
last 24 hours. [illegible] [illegible] not
[illegible] an enema. shortly after passed
a stool involuntary in bed. at night
appeared to be brighter — did not
sleep so soundly, & [illegible] [illegible]
ing his position. [illegible] [illegible]
Dec. 17th. Sounds my birth and seemed
to have no desire to eat, though he was

[illegible] - [illegible]
to a [illegible] with great
difficulty introducing into the bladder
which was done rapidly.
Dec. 18th. Pain in abdomen & urine retained — great
orthopnoea — was in a semi-conscious
state, & vomited [illegible] he was [illegible]
rapidly; [illegible] as before. in the night
[illegible] to the amount of half a
pint or more.
Dec. 19th. In consequence of his orthopnoea
sitting up. the [illegible] in the upper
part of his face, [illegible] to the
lower part of his face causing his
cheeks & lower lip to swell to a great extent
he presents a horrible spectacle sitting
up in bed. — his countenance distorted. — his nose pinched & sharp — eyes
motionless & inexpressive — breathing
slow laborious & painful. thus he

continued until 12 o'clock at night, after three heavy groans died.

Autopsy. – [illegible] on his body was great – a large accumulation of fat was found to be found; on his abdomen it was one inch thick; while the [illegible] was fader with it.

The liver was hypertrophied to twice its normal size, dark red & easily friable, appears double its natural magnitude of a dark slate color & rather easily torn than natural.

Kidneys enlarged – externally mottled with grayish matter, granular to the touch. [illegible] distinctions of the cortical fibres.

Left kidney much larger than the right, – weight of the left 5 7/8 ounces –

of the [illegible]
[illegible] of [illegible]
of [illegible] [illegible]
tissues in other respects healthy.

Pneumonia.

Treated by Prof. Roby.

David Gordon. — Aet 32 — Native of Connect.
Blacksmith — has been a temperate
man, untill the last six months during
which he has drank rather too freely —
has had Intermittent fever several
times — about three years ago fell upon
an Iron bolt, striking his stomach
and ever since when riding or jolting
in any other way, feels pain extending

[illegible] [illegible] [illegible] [illegible]
[illegible] opium. [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] with pain in chest, [illegible]
[illegible] — had slight cough, became
[illegible] on the 14th when he expectorated
[illegible] — [illegible]
[illegible] [illegible] opium, in-
[illegible] upon coughing. — on the 14th
[illegible] a dose of oil his bowels being con-
stipated.

Admit. March 17th 1850. —

[illegible]; [illegible]
compressable — respiration 20 — pain in right
side increased by coughing or pressure —
[illegible] expectoration — conjunctiva & skin
[illegible] — much debility. ordered.

[illegible]

[illegible]

[illegible] every 8 hours & to be cupped over seat of pain.

[illegible]

[illegible] — the expiration [illegible]

[illegible] — mostly sputa just appears

rusty — pulse 110 — respiration 34. Ordered

[illegible] cupping. Tart. emetic gr. ⅛ every 3 hours.

March 19th. Slept well last night — vomited

[illegible] yesterday — more jaundiced

[illegible] bowels moved once — pulse 104 — respiration

32 — the exhalation is light as night [illegible]

sputa — mostly sputa — [illegible] dullness over side — cough continued.

Ordered. Tart. Emetic gr. ¼ every 3 hour —

gruel & milk diet.

March 20th. Passed a comfortable night

skin & tongue moist — bowels moved once,

[illegible] average quantity of urine, [illegible]

jaundiced — pulse 108 full & soft — respiration

28 — no pain upon taking a deep inspiration

[illegible] – [illegible] expectoration
[illegible] at night, temperature [illegible]
[illegible] – [illegible]
[illegible] viscid & cough more loose.
[illegible]
[illegible] still a pain in [illegible].

March 21st. Slept but little last night,
[illegible] – [illegible] this
morning – pulse 100 – fine crepitation
[illegible] distinct – [illegible] diminished,
[illegible] very distinct –
exacerbations still marked. Ordered
[illegible] every 3 hours & [illegible] x
at night.

March 23rd. Slept well last night – bowels
moved twice – pulse 76 & soft – respiration
[illegible] pain – sputa [illegible] slightly
tinged & not [illegible] – [illegible]
[illegible] after [illegible] night [illegible]
[illegible] crepitation [illegible] [illegible]

[illegible] as [illegible] the case [illegible] this
[illegible]ish – [illegible] [illegible] [illegible]
[illegible] [illegible]. [illegible] [illegible]
[illegible] [illegible].
[illegible] 24th. All symptoms improved.
[illegible] the house on [illegible] to advise.
[illegible]

Meningitis.

Treated by Prof. Milton Unger.

Samuel Brown. – aet 47 – Sailor – habits
[illegible] – which on a frolic was
struck on the head with an iron bar.
and he worked senseless for some time –
on the third day after the blow he
entered the house with the following
symptoms: hands tremulous – staggering

[illegible]

[illegible] pupils [illegible] dilated –
[illegible] full & both wounds of head con-
tused & swollen as large as a flattened
[illegible] – [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] the lips. [illegible]
[illegible] wounds after opening – hopeless & if
his stomach, it being irritable continues to reject,
tends to have a very strong Infus. of green tea.
Very [illegible] attempts to stop last night
[illegible] consciousness of hands grate [illegible]
[illegible] – pupils contracted – great irritabi-
lity of stomach – eye injected – tongue dried
skin rather warm – a tendency to stug-
gishness [illegible] – bowels [illegible]
[illegible] & urine normal. – ordered Sinapisms
[illegible] stimulant [illegible]
Very [illegible] night [illegible] night, with
more muttering & starting than on previous

[illegible] – pupils contracted – face slightly
[illegible] – tongue coated red – [illegible]
[illegible] – urine [illegible]
[illegible] – [illegible]
[illegible] – [illegible] feet. [illegible]
[illegible] 15th. [illegible] – [illegible]
[illegible] tossed about & muttered
[illegible] during sleep – other symptoms
[illegible] the same as yesterday. Ordered
[illegible] back of neck. and give Calomel gr ½ o
[illegible] 15 minutes – dress blister with Unguentum
[illegible] – cold cloths to head. broth & hop tea.
[illegible] symptoms rather worse – [illegible]
[illegible] less showing a decline of the
[illegible] & increase of [illegible]
symptoms. Continue treatment.
[illegible] 18th. All night & day laid in a stupor
[illegible] roughly shaking [illegible] ask
questions & immediately lapsing into

his [illegible] state - evacuates [illegible] and bladder involuntarily in bed - pupils very much contracted - eyes injected - [illegible] [illegible] teeth. Tongue coated with black-ish [illegible] - pulse 74 [illegible]
Ordered to have viij ounces of blood taken from the arm, & continue other treat.
May 16th. But little change [illegible] - bowels rather constipated.
Ordered an injection of [illegible].
May 17th. For the last day & night has been in a dull comatose state, never [illegible] or exhibits signs of any intelligence [illegible] a state [illegible] collapsis - tongue thickly coated with a black fur - pupils very much contracted - eyes injected - face flushed - pulse 74 [illegible] - [illegible] five or six time in bed. [illegible]

[illegible] — difficulties [illegible]
[illegible] Ung. Hydrarg. ʒss [illegible]
[illegible] into the thighs & arms.
[illegible] still much stupor, [illegible]
than previously — Ptyalism has [illegible]
[illegible] — [illegible] is [illegible]
[illegible] pulse about the same. Ordered
[illegible] to beef & nourishing diet.
[illegible] 19th. Decidedly better — much more
intelligent, answers well when spoken to,
[illegible] knows [illegible] [illegible] but still
[illegible] does not [illegible] [illegible].
Ordered Omit Medicine.

Went on improving
[illegible] day when on the 22nd an
erysipelatous blush was perceived on the fore-
head & scalp. On the day previous he had
an injection of Acetas Plumbi grs x Aqua ʒiv
to the [illegible] Oxyd. [illegible] —

[illegible]
[illegible] Tinct. Iodine – Cantharides blister
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] – pupils dilated, left eye ball of a dull & [illegible] appearance – pulse [illegible] & thready – skin of extremities cold, clammy & wrinkled much on hands – [illegible] fingers short & deep mouth open & a [illegible] – difficult to arouse, gives short & [illegible] mechanical answers – mental faculties decidedly obtuse [illegible] & balls turned up. [illegible] emanating [illegible] – [illegible] & urine involuntary in [illegible] decided paralysis – erysipelas [illegible]

[illegible]
[illegible] gets gradually worse [illegible]
[illegible] when he dies.

Autopsy. [illegible] hours after death [illegible]
[illegible]
[illegible]
[illegible]
[illegible] of [illegible]
softening of the [illegible] of [illegible]
of [illegible] sides at the base. [illegible]
[illegible]

Acute Dysentery.

[illegible]

[illegible] six years [illegible]
[illegible] years. taken sick at Stevens [illegible]
[illegible] 20th. 1852. — with nausea & vomiting —
[illegible] with blood — [illegible]
over the stomach & colon — great tenderness —
[illegible] tongue [illegible] coated
[illegible] 2 [illegible]
[illegible] air. [illegible]
[illegible] the [illegible]
[illegible] [illegible]
[illegible] as follows: [illegible]
[illegible] colon, with a great deal of
[illegible], nausea & vomiting — [illegible]
[illegible] abdomen [illegible]
bloody evacuations & a great deal of
tenesmus [illegible]
the day — pulse 108 full & strong — skin

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] no diminution of pain — some nausea. Ordered by Prof. Thomas [illegible] ℥ viij or ℥ xij — and if the [illegible] some apple tea [illegible]

℞ Mass Hydrarg. ℥ss

[illegible]

℞ One every 4 hours & continue saline Mix. rice diet.

[illegible] tolerably, had ten stools during [illegible] very little blood, some bilious discharges — [illegible] this morning some [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

℞ [illegible] Soda [illegible]

Potas. Carb. [illegible]

Aqua [illegible] iv M.

[illegible]

[illegible]

Since 27th. Pulse 92 [illegible]

[illegible] moist — tongue coated [illegible]

[illegible] night — not much straining — [illegible]

pain — has not [illegible]

[illegible]

[illegible]

Since 28th. Does not complain [illegible]

[illegible] passages during [illegible]

blood — stools thin [illegible]

[illegible] Cib. Polaroa 3iv

[illegible]

[illegible] Giiss Hr.

[illegible]

leads several passages in [illegible], [illegible]

gets into a sleep treated [illegible]

profuse sweats — very sickly [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Exh. [illegible]

[illegible] xij [illegible]

[illegible] xij s. one every 4 [illegible]

[illegible] conditions [illegible] — [illegible]

[illegible] only twice yesterday — [illegible]

[illegible] — tongue [illegible] — [illegible]

[illegible] — [illegible]

Lately the [illegible]

Acute Peritonitis.

Treated by Prof. Chaves

Malaly. – Col. Conway – aet 30 – Admit. Oct 30th. – has not had children for several years. Sensation of weight in left side – has been sick – was taken with chill several days before coming in & has had several chills one daily. Pl. on admit. condition as follows: Pain in abdomen generally diffused, occasionally exquisite pain exceedingly sensitive upon pressure – tongue at margins red edges. It was to self quite well. Bowels at times constipated. It was slow, nausea & vomiting – obstinate constipation, urine scant & – respiration hurried – tongue coated & red round edges – pulse 136 small & tense. Ordered Venesection xx ounces – injection of Flax & Lin. Calomel grs v Pulv Opii gr i at once.

was [illegible] a few minutes was rejected [illegible] — [illegible] time to [illegible] — [illegible] failed to produce an evacuation — another injection was administered of ℞ Olean Terebinth ʒi

Olei Ricini ℥j

Mucilag Acac ℥Ss. M.

[illegible] this did not operate freely — frequent desire to get up to stool but without the ability of passing [illegible]

℞ Hydr Prot Chlor. grviij

Pulv. Opii grj M.

[illegible] every [illegible] each [illegible] day.

Dec. 1st. Seems to be more composed, not suffering so much pain — bowels [illegible] constipated.

Second. Seen by Prof. Chew for the [illegible] time — [illegible] — does not [illegible] bowels [illegible] as much as usual — pain [illegible] [illegible] — [illegible]

[illegible]

℞ Mass Medicinal. grs xij

Pulv. Opiac. grs iv

Pulv. Opii grs ij Mfk. Pil. 6

[illegible]

abdomen & as soon as the leech-bites stop blistering apply a blister to the neck with [illegible]

Dec 4th. Pain not quite so sensative – eyes [illegible] – has more [illegible] – vomiting ceased – bowels [illegible] – urine more abundant – respiration more natural though a little hurried – tongue still coated papillae [illegible], [illegible] not strong. [illegible]

Dec 7th. Still she remains in about the same condition tongue [illegible] – respiration nearly natural – bowels [illegible] – [illegible] a little increased still complains of pain in the abdomen [illegible] tender to

pressure, pulse [illegible] [illegible] and
continue Pills.

Dec. 11th. [illegible] [illegible] [illegible]
conditions improved. Ordered Omit
[illegible] [illegible]
to Lake Lecoch. Lodgewood.

Dec. 13th. Continues to convalesce slowly —
[illegible] [illegible] — very little [illegible]
tension — pulse 98 & regular. Ordered
continue [illegible].

Remains in the house for a few days
afterwards.

Lithotomy.

Performed by Prof. N. W. Smith.

Dr. J. H. Conroy. – aged 24 – [illegible] always enjoyed good health with the exception of the uneasiness caused by the stone. – About 14 years ago first felt a burning sensation in urination, sudden stoppage of water – about six years ago [illegible] to Prof. Smith who [illegible] condition, with intervals since he was taken ill with stone in the bladder.

Admitted Dec., the condition attending the stone – irritability of bladder caused by the stone – cut off by still pain in the glans penis – continually feeling as if he [illegible] to eliminate his urine – frequent desire to make water – sudden stoppage of the stream of water in micturition – he was sounded; the existence of the stone was made sensible to the ear & finger

by the Towels. [illegible]
of half teacupful of flaxseed tea with xxx drops
tinct [illegible] Vacciniæ ℥ss. — when
it operates, [illegible] the injection into the blad-
der his urine was drawn off by a Catheter
which afforded him great relief.
The day before the operation he was ordered
to have an aperient & in the morning to have
some nourishing diet.
Dec. 15th. The operation of lithotomy
was performed upon this man.
He was brought into the chamber
exercise — he offered up a prayer for the
success of the operation & said: "to be sure
he was in the hands of a skillful & eminent
surgeon and if he died under his hands
it would be all right."
He was placed upon his back on a
table about two feet a half high — his
shoulders supported by [illegible] of pillows

[illegible]

[illegible] outside of each [illegible] the [illegible]

[illegible] — [illegible] staff

[illegible] his own — consists of a groove

[illegible], with a director attached to which

is [illegible] external cutting director.

The [illegible] introduces it

into the rectum to explore the surface of

the perineum — every thing being now

[illegible] — an assistant on each side

holding the thighs firmly asunder —

another assistant to hands him the

[illegible] [illegible] external

cutting director into the groove in the staff

then with his finger carries it along the

groove making a free opening — then with

[illegible] the staff introduced [illegible] fingers of

left hand into the bladder dilating [illegible]

[illegible] introduced
[illegible] the bladder —
[illegible] successive efforts
[illegible] assistance to press
[illegible] behind the symphysis pubis,
[illegible]
in an instant — the stone [illegible]
[illegible] was and
[illegible] waited for a short time, or
[illegible] proceeded to dress the
wound with lint. was removed
to his bed, and ordered to lie on his
left side, perfectly quiet and to abstain
[illegible] drinking any but low to
the [illegible] [illegible]

No untoward symptoms
occurred except a slight diarrhoea at
night which was stopped by xv gtts
[illegible] after the [illegible] operation.

[illegible]

An

Inaugural Dissertation

On

Peritonitis

Submitted to the examination

Of the Regents, Provost and Faculty

Of Physic

of the "University of Maryland",

For

The degree of Doctor of Medicine

By

W. B. Biscoe

of

Maryland.

Gentlemen,—

The time has at last arrived when it is required of each Candidate to submit to your examination a Thesis of his own composition in some way connected with the Practice of Medicine, Surgery or Obstetrics.— therefore, I have chosen as the subject of my Thesis "Peritonitis, or inflammation of the Peritonæum".

As a just and true appreciation of all diseases, wherever situated depends upon our knowledge of the Pathological changes made by disease, so our knowledge of those changes is dependent upon our ability to diagnose disease during life by certain symptoms and signs occurring in such disease during its progress, and a corresponding ability to detect such changes after death, by comparing them with those parts in a healthy condition. Therefore, I shall notice this membrane my briefly

in its healthy state, before proceeding to speak of it in an inflamed condition.

The walls or parietes of the abdomen are lined by and are fortified by a membrane, receiving the name of Peritonaeum from its being the surrounder of the cavity of the belly. This is a serous membrane and is therefore a shut sac. To this there exists only one exception in the human subject; this is found in the female where the open extremities of the "Fallopian Tubes" perforate the Peritonaeum, and it is continued on with their mucous lining. Even this is hardly an exception.

This membrane as it lines the whole cavity of the abdomen must consequently invest whatever viscus or viscera that cavity happens to contain. In doing which it is reflected from one portion of a viscus to that of another, until it has in its course enveloped the whole of the contained viscera, and is then reflected onto the walls or parietes of the abdomen. Thus the

different viscera are enveloped and retained in their place by the peritonaeum, which seems to be its principal, or indeed, its only function. In color the peritonaeum is of whitish, or bluish-white in appearance. In its healthy condition it is smooth and shining on its surface, but it like every portion of the human body is liable to be changed by inflammatory diseases. It does not appear to have any blood vessels sent directly to it, but is abundantly by those which pass directly under its surface.

It matters not at what point we commence the demonstration of the peritonaeum, or the course we take, we will on following out its full extent arrive again at the point of departure, thus proving its continuation.

This membrane differs somewhat in the female and male, having to invest in the former the Uterus and Vagina, yet in all cases can it be traced and its continuity seen.

In treating of Peritonitis we will very briefly notice Inflammation, forming as it does a great portion of the maladies to which man, in his weakness, is exposed; and consequently those to which the Surgeon and Physician will be, or are called to mitigate, should they be beyond their power to cure. Either one of them, on being summoned to a sick man would ask himself this question, "How I in this case to deal with frank and open inflammation? This settled, what must be done to meet the demands of the case?

Inflammation is known to affect all parts of the human frame, that are supplied with blood-vessels, and different parts vary differently. Inflammation is much more common than any other malady, or special disease, being so easily excited by many external and internal causes. The human frame is daily exposed to the exciting and predisposing causes of Inflammation; therefore, a great many diseases

to which man is exposed, either begin with inflammation, and in inflammation, or are accompanied by inflammation during some part of their course, or resemble inflammation in some of their symptoms.

But the interesting phenomena of inflammation are not confined to their destructive consequences, but evince great good in their healing powers in disease. We see the good, and only efficient powers of inflammation in healing wounds, and of its production properties in the uniting of fractured bones; and, above all we have its life saving remedies in internal abscess, in which it produces adhesions, thus conducting the effused matters to the surface and thereby preventing their escape into the cavity of the belly, thereby rendering what would be otherwise fatal, amenable to treatment. This not done, peritonitis, with the escape of the contents of the bowels within the cavity of the Peritonaeum, must of necessity prove fatal. In this manner a moderate degree of Inflammation becomes my con-

servative in its effects. Inflammation can be directed and controled in many cases. The Surgeon can excite it at his pleasure; this is what he does when he injects stimulating injections into the Scrotum, after drawing off the water in an Hydrocele, for the purpose of inducing a higher degree of inflammation than would otherwise result, for the purpose of causing the serous surfaces of "Tunica Vaginalis" to adhere, thereby obliterating the sac, and virtually preventing any further collection of fluid in the sac, though this is a dangerous Operation.

However interesting inflammation may be in any organ or membrane, that in a serous membrane presents phenomena that are not found to so great an extent in any other part. For while inflammation in a serous membrane would produce adhesions to the opposite surfaces, the same amount of inflammation in the mucous surfaces would cause ulcer-

ation in these mucous membranes. And to another very remarkable difference is while a moderate degree of inflammation produces adhesions in these membranes, it requires very strong inflammation to produce ulceration in serous membranes; whereas a moderate degree of inflammation in mucous membranes produces ulceration, it requires inflammation of an inordinate action to produce adhesions in these membranes. And in no serous membrane is this adhesion, or gluing together as it is called, more frequent, and in none are the remarkably good effects of inflammation so evident as in this great serous cavity, the Peritoneum!

How do these adhesions take place? In inflammation of serous membranes their surfaces become reddened in spots, or more frequently in streaks; these evidently coalesce. Sometimes however these membranes do not become reddened but loose their polish and become of a smutty appearance. The Sub-

jacent cellular tissue becomes infiltrated with serum. The accumulation of fluid goes on in the membrane, unless the inflammation is very slight, and the absorption action, in which case the fluid may be absorbed as fast as it is poured out into the sac. In some instances the inflamed membrane covers its surface with a glutinous substance, which may be deposited in layers, and agglutinate the opposite serous surfaces together. This substance consists of the fibrin of the blood and a mixture of the albuminous liquid.

This fluid becomes denser and denser, and more and more adherent, while the serous liquid was at first limpid, now becomes turbid, and whitish, or yellowish flakes of coagulable lymph are seen floating in it, which are the same in character as those sticking to the surfaces. These are finally penetrated by blood vessels, and become organized, forming what are called false membranes. It is by this pro-

ces that the opposite surfaces of the peri-
tonæum become united; it is by this, that
the folds of the intestines adhere to one anot-
her, and to the sides of the inveeting cavity
which are lined throughout its extent by
serous membrane. This is called adhesive
Inflammation.

The Peritonæum not unlike other serous
membranes is very readily induced to take
on inflammation, upon the application
of certain exciting causes. Peritonitis like
inflammation of the pleura is a very pain-
ful disease, and subject to the same dis-
ease conditions and consequences. While in
a healthy state the peritonæum is endow-
ed with very little vitality, yet, as soon as
it becomes the seat of inflammation it is
of most pains, the most painful. Inflam-
mation of the peritonæum may be acute
or chronic. Acute Peritonitis begining in
one spot, is apt to extend itself from one
to another spot that may happen to be in
contact with this inflamed spot. Thus brav-

using by contiguity the whole extent of the peritonæum in a comparatively short space of time. It is in this way that we account for local and general peritonitis; the former is apt to be in consequence of some injury sustained by the peritonæum through the walls of the abdomen from without to within, while the latter may be the consequence of a general inflammation from the commencement of the disease (or attack), or it may be that the disease set in as local, but ran into general by continuity of surface, or contiguous inflammation.

In Peritonitis we have serum poured into the cavity of the peritonæum, this serum containing coagulable lymph; while the intestines are pressed over against the parietes of the abdomen, this lymph becoming organized forms bands, extending from the surface of the intestines to the walls of the abdomen and binding the opposed surfaces together. In this respect the similarity between inflammation of the peritonæum

and the pleura is very striking;- and the morbid appearances which remain after death in one will generally be found in the other disease

The Symptoms of Peritonitis are various. The attack may be preceded by chill, but more frequently sets in with pain; but very often the two are simultaneous, that is the pain and chill commence together. The pain in peritonitis has all the characteristics of inflammation in serous membranes. It is very sharp and very severe; being very easily increased by pressure though moderate. So strikingly is this the case in peritonitis, that the slightest weight causes the most agonizing pain; the bed clothes becoming insupportable, and the patient will allow nothing to touch him but the sheets. The patient generally lies on his back, with his knees drawn up, for the double purpose of preventing the bed clothes from pressing down on the abdomen, and to place the abdominal muscles in as comfortable a state as possible. This supine position is very gracious also in

hinding the opposite surfaces from rubbing together. All motions of any kind give rise to excruciating pain, whether they are voluntary or involuntary. Hence the patient lies motionless; does not use his abdominal muscles in breathing more than he can possibly help. The motions in and out of bed are exceedingly painful and tormenting to the patient; he suffers very much when he has to evacuate his bowels or bladder. Coughing and sneezing, owing to the jarring and succussion they give rise to, are no less tormenting.

The pain generally begins in the lower part of the abdomen, in the hypogastric, or one of the iliac regions and is thence extended over the whole of the peritoneum. Sometimes it is changeable, occurring now in one spot then in another, before the pain has become localized. The pain in this part is usually attended with a sense of heat and burning. The abdomen is always tender to the touch. From the commencement of

peritonitis the abdomen appears hard, tense, and elastic; and very soon a tumefaction commences, which increases with the progress of the disease, and towards the close assumes the character of tympanites. In some cases there is little swelling; and in others there is none at all - the abdomen being drawn in by the contraction of the muscles. The swelling is for the most part uniform, but it may be in spots, giving to the hand the sensation as if pressed upon tumors, and they may be movable or immovable. While tympanites exists the abdomen will, when percussed, elicit a sound as clear or clearer than during health; but after there is any great quantity of fluid poured out percussing over that region will give a dull sound, particularly in the most dependent portion. We may also hear the friction sound, after the disease has lasted for a short time; and heard produced by the same movements, and dependent upon the same condition of parts as in the chest, the

sticking together of the serous membranes strengthened by coagulable lymph.

There are various other symptoms besides those already mentioned, either dependent upon the inflammation being transferred to other parts, by contiguous inflammation, or they are entirely sympathetic. Now as we have seen the pain is often confined to particular spots, we have every reason of suspecting the pain in giving rise to particular symptoms, as the consequence of the pain so situated. For when that portion of the peritonaeum, covering the stomach is inflamed we will have nausea and vomiting; and they may prove very obstinate, resisting many of our ordinary remedies. Should the muscular tissue of the intestines become inflamed, we will have constipation; but this symptom is not constant and may give way to an opposite state of the bowels. If the inflammation have attacked that portion of the peritonaeum, covering the bladder we will have great

pain in the hypogastric region, and if the inflammation should be in that portion covering the kidneys, we will have great tenderness in the lumbar region, with suppression of urine; if it be on the region of the liver that the inflammation happens to have set in, or to have localized itself we will have it shown in the skin, eyes and tongue, they will assume a yellowish color in consequence of the inflammation being extended to the substance of the liver. Obstinate constipation with low seat of pain shows that the peritoneal covering of intestines is inflamed.

The face is pale, contracted and wears a very anxious expression, which indicates great pain, which pain is very characteristic of peritonitis. The pulse is various in its number of pulsation in the minute, ranging from 100 to 140; it is small in its frequent form. But more generally it is full and nearly natural. The chill with which peritonitis sets in is followed by febrile heat, which soon subsides in

many cases; and during the whole attack the surface is hardly warmer than in health. The breathing is short and suspended, performed entirely with the thoracic muscles, the abdominal wall kept in a state of repose, not moving as in free respiration. The tongue is generally covered with a whitish fur, sometimes the coating is yellow, and most on the surface; but sometimes it is dry and red, or it may remain nearly natural. The patient remaining wakeful and extremely restless.

Peritonitis may, like other inflammatory diseases, be connected with a Typhoid State of the System from its commencement, or it may run down into a Typhoid grade. This condition is generally connected with great prostration, both in body and mind. There is a tendency to hemorrhage from the mucous membranes, particularly from the bowels. With this typhoid state, and indeed, in the more active form, we may have the nervous system much disturbed; as

headache, delirium, subsultus tendinum, coma &c. The patient is wakeful and thinks, what is literally true, that there is hanging over him some great danger. It is stated to have occured regularly in the course of an intermittent, and subjecting the patient to great suffering during the paroxysm, and leaving him entirely during the interval, until it became permanently established and continuous.

There is another form of peritonitis which is caused by perforation of some hollow viscus, and the escape of its contents into the cavity of the peritonaeum. This is usually fatal; but it may be not be so in any case. For as this membrane pours out coagulable lymph, the foreign matter may be surrounded in this lymph, and then will abscess be formed and in this way is Nature competent to meet the demands of the case. We must aid her in her efforts, by quiet to bowels and repose to the patient; and above all do nothing to impede her efforts to save life, which

which without her efforts must prove fatal.

There is a form of peritonitis which is unquestionably contagious. This occurs in women soon after labour, in a day or two, or it may be in an hour or two. Being contagious it is consequently more apt to prove fatal, because women are more exposed to its ravages. The pain may come on suddenly or gradually; and it is very much like after pains with which it may be erroneously and dangerously confounded. In this form the pain commences usually in the region of the uterus.

Peritonitis may be caused by the ordinary causes that give rise to inflammation, as vicissitudes of temperature, excessive use of stimulating food and drink. It is mostly caused by direct violence, as falls, blows over the abdomen, bruises of all sorts, but is more apt, and is oftener produced by sharp pointed instruments entering the cavity of the peritoneum. The surgeon excites this disease when he operates for stran-

gulated Hernia, and in Lapsing and in the Cæsarian Section. There are many other causes.

The diagnosis of the disease, if well developed, is comparatively easy. From Colic of all kinds by the great tenderness, the more constant and persistant pain, the patient remaining in the supine position all the time. In colic pressure relieves pain, in this aggravates it. In the inflammation of any organ, which is covered by peritonæum there may be some symptoms which would call our attention to them, and give us an insight into this condition, but should we not be able to make the distinction between an inflamed organ, and its covering, we would have to treat the most severe.

Treatment. In peritonitis we have two great indications: 1st. to subdue inflammation, 2nd to treat an inordinate symptoms that may arise during the Course of the disease. Now as we have shown peritoni-

itis is a high degree of inflammation, and being seated in a serous membrane which when inflamed causes so severe pain to the human being, and gives rise to such evil consequences, as perforation) we must be ready to meet the results of the disease in all its varieties, and ready to ward off the evil mishaps which if not met, and met promptly and actively will in many cases prove fatal. If it were only in our power to relieve pain how gracious would this be to an individual suffering with or of sever peritonitis; but experience has shown that the timely and prompt application of remedies has in many cases worked cures, which, without such application would have proved fatal in many, and in others left their victims in a state hardly preferable to death.

For subduing inflammation and giving ease to the patient, the lancet has no rival. It is the sheet anchor of hope, when promptly and actively used. In this disease

circumstances which would forbid. Its employment must be acted on with great discretion; the pulse will often rise under the flow of blood, and so like as that it is called for. No stated amount can be given, but our judgment must be our guide; and must be repeated if called for.

"See your patient," says Dr. S. Chew, "in an or two hours, note the effects of the bleeding and the state of the pulse, and if called for bleed by lancet." Local bleeding may be practiced in many cases in which an general bleeding has been practiced, but sufficient sedation has not followed its use, but does not call for lancet. Dr. G. W. Mullenhagen has drawn 90 ounces by lancet and applied 60 leeches on the abdomen before he could make an impression on the disease, or subdue inflammation.

Among other means are cathartics; these are not so good as the antiphlog-

istic remedies. Among cathartics Castor Oil and Salts are best.

The advantages of bleeding are many: Bleeding subdues inflammation more promptly and actively than any known remedy; it promotes the action of other less efficient means by lessening the amount of blood circulating in those vessels, thereby increasing their absorbing power; and also of promoting the absorption of those fluids elaborated by the peritonaeum in its diseased state.

Next to bleeding stand Opium and Calomel in this disease, as in all the other inflammations in serous membranes; particularly the Calomel. We must often carry the calomel to its constitutional effects. And in commencing its use it is well to give a full dose of the agent combined with Jalap, say Hyd. Gr. x; Jalap Gr. x, which will act promptly as a revulsive, provided bleeding has been premised; and in no case should they be given unless it has. These, if the bowels are not moved by them,

must be followed by Salts & Senna. And if deem it necessary to give the Mercury so as to give the patient the advantages of this all powerful agent, we may give Calomel 3 or 4 grs., Opium ½ gr. every three or four hours untill the gums are slightly Touched. Salivation should be tried in all cases that have lasted three days, if the patient is not better of course. For aiding our objects in this plan we may use inunction, rubbing Mercurial ointment in the skin, or sprinkling Mercury over the denuded surface.

Vomiting, which is often obstinate and exceedingly annoying to the patient, is best and most readily relieved by drawing blood by cups or leeches applied over the Epigastric region. Digitalis will, if there is no pain, and vomiting has been allayed, act well in this disease as a sedative. Opium is invaluable in this to meet reaction after bleeding.
In the latter stages of the disease we would use stimulants and tonics. Among the

former we would give Wine and ammonia; among the latter we would give Quine and Iron. Throughout disease the bowels must be gently moved by mild aperients as Salts, Ca Magnesia or C bil. And whatever symptom that may arise must be met according to its severity and importance.

When perforation has occured our only hope is in quiet and rest. The patient must not move more than is absolutely necessary. He must have Opium in large doses so as to lock up his bowels, and thereby preventing any voluntary movements which are necessary in evacuating his bowels, and, preventing the escape of any of the feces from its natural passage through the perforation into the cavity of the belly, while Nature in her wisdom cures the disease - though this is my view, I am thinking. This cure takes place by the adhesive inflammation; and as it is in the milder attacks of peritonitis that we have perforation, would, or might not the system be too mu-

ch broken down to undergo so trying a task.

I have confined myself to the Acute form of Peritonitis and should we have a case of the Chronic, our objects would be the same, but our plan of carrying them out must not be so active and vigorous; for while in the former, we must deplete or the patient die, in the latter we must build up or the Patient will sink lower and lower, until death closes the scene of this mortal existance, and he is carried into the presence of his God.

An

Inaugural Dissertation on Opium

Submitted To Examination,

To The Provost Regent,

And Faculty of Physics of The

University of Maryland

To The Degree of Doctor of

Medicine.

By Wm. H. Norris.

of Baltimore Md.

Feb. 4th 1853.

Gentlemen.

In accordance with one of the laws of the Faculty making it incumbent upon Candidates for the degree of Doctor of Medicine to deposit with the Dean of the of the Faculty an essay of his own Composition, on some subject Connected with the practice of Medicine.

I shall therefore endeavour to Comply with such requisition as briefly as my subject will admit.

It is proper that all sciences be well understood and appreciated for they all present a large field for investigation, worthy of the most gigantic minds. But to the medical student the science of Medicine presents attractions, in no wise inferior to any other branch of knowledge.

The whole range of medicine, which his diligent and undivided attention and will amply reward his toil.

Talents of the highest order have entered into this field of investigation, and the most sanguine anticipations have been fully realized.

But, it is not the charms of philosophy nor an honest ambition of fame, which, in this case are alone to be consulted, considerations of prudence and the claims of humanity alike urge me to the acquisition of the profession.

In no relation in which man can be placed does he encounter greater responsibility than in the practice of medicine, the lives of his fellow men

are intrusted to his care as well as dependent upon his skill, and amid the most trying and perplexing difficulties, his character is committed to the tribunal of critics, and too often incompetent judges, and nothing but conscious ability can arm his resolutions or protect his feelings from insult.

Of that knowledge which lends its aid to art, it is not only requisite that it be possessed but that it be present and forthcoming, and in the practice of medicine above all others is it incumbent that his knowledge be ready and at command, and no where is promptitude and decision more required

and in no instant is the man of science more distinguishable from the mere pretender, and in no situation is the Conduct of the practitioner, more the object of present attention, and admiration than in the sick Chamber.

Firmness and decision founded on accurate, and precise knowledge will secure to him present Confidence and future approbation.

Such Gentlemen are my views of the practice of medicine, and if I shall be the instrument in the hands of God in ameliorating the suffering of my fellow men will be all that I desire.

Opium.

Opium is one of the most important articles in the Materia Medica, and as it is more frequently prescribed by the Physician than any other drug in his possession,

Will be a sufficient excuse in me selecting it for my thesis.

Opium is the concrete juice of the unripe capsules of the Papaver Somniferum, or White Poppy. The process for procuring it is nearly the same in all countries. It consists in making incisions into the unripe capsules, and then collecting the juice, the exudes. The incisions are made at night or just before the falling of the dew.

The poppy is cultivated in various countries, but principally in Asia, Egypt, Hindostan, and Europe. It is also cultivated in our own country but principally as an ornament.

The principal varieties met with in commerce are the Turkey, the Indian, the Egyptian, the Persian, and the European.

Our market is principally supplied by the Turkey or Smyrna variety, which comes direct from the Levant on the Southern Coast of Turkey.

It occurs in irregularly rounded or flattened masses, varying in size from a half pound to two pounds in weight, and is covered with the capsules, and

leaves of the plant, when it is first gathered it is soft and ductile, and of a reddish-brown color, but it soon becomes hard and of a blackish color from exposure to the air, and when it is broken, presents small shining tears.

The Smyrna opium is said to be the best met with in Commerce yet this is frequently very impure, for I have met with it largely adulterated.

There are certain qualities which belong more or less to all varieties of the drug. The odour is strong and characteristic, but in some varieties more so than others.

The taste is very bitter and more or less sharp and pungent

and when chewed for sometime will irritate the mucous membrane of the mouth and fauces.

Pure opium should not undergo any change by keeping, and when broken it should present a rough and granular surface, and when drawn across white paper should leave an interrupted black mark.

Water dissolves about two thirds of it including some of its active principals. Alcohol nearly four fifth of its weight, and all of its active constituents, and the dilute acids both mineral and vegetable take it of all its virtues.

Opium contains a great number of principles, but none of them are of much interest to the practitioner with the exception

of morphia, as these are but seldom used in this Country, it is true that Codeia and Narcotin have been occasionally used, but they have not been found to have any virtues not equally possessed by the salts of morphia.

The manner in which opium acts upon the system is not as yet fully understood, that is whether it acts directly upon the nerves with which it is brought into contact and through them on the brain, or whether it is absorbed and enter the circulation and then act upon the nerves distributed to the inner coat of the blood vessels or whether it is carried by the circulation to the great nervous

Centers

There can be no doubt, but that it is absorbed for it has been detected in the secretions. Dr Dunglison gives a case in which it was found in the milk, and many others could be named. I had a case of the same kind last summer in the person of a lady of this city in which I administered opium, and her child was completely narcotized.

The therapeutical effects of opium may be defined to be agents which first excite and then diminish nervous action, and in appropriate doses stupify or in other words in small doses excitants and in large sedatives and narcotics.

But it should be borne in mind that opium does not affect all persons alike and there is perhaps no article of the materia medica which disagrees with so many individuals or which so often produces effects on the system not desired by the physician. Opium, on the other hand others require large quantities of it, and it is astonishing what a large amount some persons will tolerate without producing the ordinary effect. Dr. Chapman relates a case in which 3j of pure opium was taken in 24 hours. and if my memory serves me right — Dr. Mittenberger spoke of a case in which 480 gr. were administered in the same space of time

and I have a customer that consumes 4 ℥. per day. Yet on the other hand, others are affected by the smallest quantity, and it should be borne in mind that infants are extremely impressible to its action and therefore it should be administered with great caution &c.

In excessive doses opium and its preparations are narcotic poisons, and when such doses have been taken the treatment consists in evacuating the stomach by means of the stomach pump, or emetics of which the best are the sulph of Cop. or Zinc. and if these are not at hand warm water, salt or mustard. When this has been accomplished a strong

infusion of green Coffee should be administered, and Cold application to the head.

It would be presumption in me to attempt to point out all the numerous cases in which this invaluable anodine and hypnotic is capable of rendering service. I will therefore confine myself to some of the most prominent.

In intermittent fever it is frequently used with much benefit. I have seen much good accomplished with it given just before the anticipated paroxysm, and if it has not prevented the paroxysm it has ameliorated the Cold stage and also anticipated the hot.

It also in Continued fever when we have much nervous

excitement such as great restlessness and want of sleep it is one of the very best agents we have in our possession. and Dr Mittenberger extolled it very highly in his own case of typhoid fever in which these symptoms were present But opium is contraindicated in congestion of the brain or where we have much inflammation of that organ.

In Cholera morbus it is one of the best agents we have, for I can fully attest to its efficacy in this disease from experience upon myself in which it acted like a charm.

So also in diarrhoea and dysentery it is well worth much benefit indeed in the

commencement of those diseases a single dose of opium is often sufficient to put a stop to them and in the latter stage opium in combination with Calomel is one of the most best agents we have in our possession, and in inflammation of the peritoneum both of the membrane proper and its extension over the different viscera it has been used largely and with wonderful success and the illustrious Dr. Armstrong has spoken in this disease in evidence it to be perhaps the most efficient agent that we possess, and although he estimated it best to unite it with blood-letting yet he was disposed to think that if he himself were labouring under inflammation

of the peritoneum, and were I at
that in much pain I should abor-
the lancet singly, or upon opium
singly, he should be disposed
to select the latter.

It is moreover in spas-
modic diseases that opium is
most useful too, in every variety
of these diseases it is used with
wonderful success, so also in
tetanus and hydrophobia &c it
is of great value, but it is
in delirium tremens that we see
its good effects, manifested, indeed
it has been by many considered a
specific another I have seen much
benefit from it in this disease,
and last summer I treated two
cases of this disease with it with
perfect success.

"Finally it may be said of this
Invaluable article.
"Opium equalizes each joy, allays each grief
Bestows rise each [illegible] equal [illegible]"

Wm H. Norris.

Baltimore Md.

Feb 10th 1853.

An
Inaugural Dissertation
On
Erysipelas,
Submitted to the examination
Of the
Provost, Regents and Faculty
of Physic,
Of the
University of Maryland
For the degree of
Doctor of Medicine
By
John W. Hamm
Of
Virginia.

To
Mrs. [illegible] the following
lines are most respectfully
inscribed by his friend and
pupil

John W. Barrow.

Erysipelas

The superscription presents the name of one of the most violent diseases that assail life.

It may be defined to be a diffuse inflammation of the skin, or the skin and subcutaneous cellular tissue.

It is characterized by a diffuse redness, heat, and a pungent smarting (though not very violent) pain of the part.

It may affect a very limited extent of surface, or may extend over the whole body.

The local disease is generally preceded by certain initiatory symptoms; there is considerable indisposition experienced by the patient, he loses his appetite, has shiverings and violent pains in his limbs accompanied sometimes with vomiting, and always with weakness and dejection.

In cases accompanied by hepatic derangement there is a bitter taste in the mouth,

The tongue is moist and [illegible] with mucus, and frequently there are from the stomach foul eructations. After a period varying from a few hours to several days, the true vesicle [illegible] by the appearance of a small pimple or infiltration of a small portion of the skin, whence it spreads to the surrounding parts; there is more or less swelling of the part, with more or less elevation of its edges. Under the pressure of the finger the red color disappears, but again returns upon the removal of the pressure.

A sensation of dry and burning heat, and a stinging, smarting or scalding pain accompanies the disease throughout its course. The cuticle covering the inflamed surface, is frequently raised into blisters of various sizes, which is owing to the effusion of serum beneath it. The most of these blisters burst on the very day of their appearance

and by the drying of the serum, which they contain, an incrustation forms over the affected part.

The local and constitutional symptoms generally keep pace with each other, and continue for three or four days, when after reaching their max. immoderately they gradually decline. But there is not always an exact ratio between the local and general symptoms in this disease, one may be slight while the other is violent.

The most frequent and favorable termination of erysipelas is in resolution, which is indicated by the gradual subsidence of all the symptoms. The cuticle which has been vesicular, now cracks and sheds a shed of yellow, with a diminution of the heat, pain, and swelling begins to detach into shreds of different sizes,

[illegible] part of [illegible] is a
great tendency of this disease to mitigate
lesion, instead of running a rapid
course in the part first affected, it
leaves that seat and attacks other
parts or leg made from it, and
leaving behind only a slight degree
of discoloration and a disposition of
the cuticle to desquamate.
In certain conditions of the general
system, there is a greater degree of
swelling than usual, owing to the
effusion of serum into the skin and tissues of
the cutaneous tissue. The skin presents
a smooth and shining appearance,
pits upon pressure, and retains the
print of the finger for some time
after wards. This form of the disease
is generally found in weak and
debilitated conditions, and is very
liable to be followed by gangrene.
This is the form denominated adematous or pitting.

There is another form of erysipelas, which seems to partake both of phlegmon and erysipelas, and is denominated phlegmonous erysipelas.
It is accompanied by an aggravation of all the inflammatory symptoms, does not extend above the subcutaneous cellular tissue, but also the intermuscular cellular tissue.
There is a violent burning pain, with a greater degree of swelling than usual, and a brawny feel of the part. The constitutional symptoms are so violent as to endanger the life of the patient, and seldom terminates in resolution.
After the lapse of five or six days the pain becomes pulsative in its character. The redness now becomes less intense and more circumscribed, but the swelling increases and requires a deeper tint.

The patient has a shivering fit, followed by excitement and subsequently by exhaustion. Suppuration takes place, which may terminate the existence of the patient, or extensive abscesses may be formed which on being opened either naturally or artificially discharge a quantity of pus mixed with shreds of mortified cellular membrane. Thus leaving behind an extensive breach, or solution of continuity to be repaired by nature. Nor is this character of the disease the most violent. It is sometimes of greater intensity still and with still more unfavorable tendencies. The local symptoms attain their maximum of intensity within two or three days; the patient from the intense burning fever, suffers extreme distress; there is a livid color of the skin, an offensive white tongue,

[illegible] and pain [illegible], [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] abscesses are formed beneath, and followed by gangrene. The slouches are detached very large, and the breach of continuity is still [illegible] [illegible]. This tendency of the disease may be owing to either the depressing nature of the cause, which produced it, or upon certain co-operating influences of a debilitating character. The patients attacked with this variety of the disease, generally first [illegible] it, from the exhausting influence of the extensive suppuration and absorption of pus into the system.

Of the various [illegible] of erysipelas, the [illegible] seems by far to be the most frequent — facial erysipelas. In this situation, it is distinguished by the great degree of swelling, that attends its progress, with violent headache, sleeplessness and more or less delirium during the night. It is particularly liable to recede from the face and attack the brain or its membranes.

[illegible]

generally [illegible]

[illegible]

of which, visible, but the scalp is exceedingly tender to the touch and there is a great degree of swelling. The seat of [illegible] seems to be in the cellular membrane beneath the integument, and consequently is frequently the seat of suppuration [illegible], which [illegible] rarely escapes.

There is very often an inflammation of the breasts of [illegible] [illegible] [illegible] being very much the phlegmonous variety of erysipelas.

Erysipelas is generally accompanied with severe systems, when it attacks the extremities than when it attacks the trunk or head, owing to the extension of the inflammation among the fascia and cellulous structures of the arms and hands, or legs and feet. Erysipelas sometimes attacks the scrotum and penis and is accompanied with a great degree of

[illegible] exertions exciting.

[illegible] It [illegible] be an accumulating cause in [illegible] from the crowding together of so many in a [illegible] apartment. It has been in many cases ascribed to cold, certain articles of diet, violent mental emotions, suppression of habitual discharges &c. But there must be some predisposition to the disease when excited by such causes. Some persons seem to be constitutionally predisposed to it, and are affected sometimes without any exciting cause being known. Others again are periodically attacked with it. [illegible] It is sometimes preceded by a [illegible] sensation of [illegible], or [illegible] spasms. It is known to [illegible] [illegible] fever. Some suppose that the disease sometimes is owing to some unknown condition of the atmosphere. It is confined to no age, sex, or season, though it seems to be more frequent in Spring and Summer, than at any other seasons, and more [illegible]

in the female [illegible] treat. [illegible]
to be confounded with any other disease of the
skin, [illegible] [illegible] [illegible] [illegible]
[illegible] be [illegible] [illegible].

In [illegible] cases of [illegible] [illegible]
little [illegible]; the patient should be kept
in the horizontal position, especially if the
case be seated in either one of the lower ex-
tremities; [illegible] should be [illegible]
[illegible], and antiphlogistic regimen should be
strictly observed. If the disease appears with
symptoms of greater severity, and show a ten-
dency to spread widely, as well as more deeply
into the integument, with hot and painful
skin, and a hard and frequent pulse, blood
should be taken from the arm, according
to the strength of the patient and the intensity
of the symptoms; [illegible] [illegible] and lax, em-
[illegible] may be [illegible]; then a dose of Calomel follow-
ed by [illegible] [illegible]. The part should be bathed with
a soothing [illegible], [illegible] [illegible]
a strong blistering plaster, or nitrate of silver,

[illegible] applied beyond the boundaries of the inflamed part, as in the middle form, the antiphlogistic regimen, and absolute rest are requisite in [illegible].

[illegible] the inflammation [illegible] of parts or viscera should not be [illegible] be replaced in the [illegible] of the [illegible] in a young and regular [illegible] full and strong pulse, thirsty face and delirium, and the part affected is full, tense, and painful, not blood may be taken with holdness from the arm, and from the affected part by means of leeches: a cathartic should be administered consisting of jalap, and antimony, and after its operation a calomel purge should be administered and followed up by black draught or the mild saline laxatives. The calomel should be continued in small [illegible] at intervals of two or three hours during the day. In addition to the [illegible] the

[illegible] be avoided throughout the stage of excitement. A [illegible] dilated leeches should be applied in the early stage, [illegible] if [illegible] [illegible] [illegible] [illegible] the inflammation are about [illegible] [illegible] in length. [illegible] [illegible] [illegible] when the [illegible] is great and [illegible] [illegible], with great [illegible] [illegible]. [illegible] [illegible] [illegible] as the [illegible], [illegible] [illegible] will be [illegible] [illegible] [illegible] which they fulfill. They are necessary in the discharge of pus and slough. They should be followed by nitric acid lotions, when there is sloughing, and a bandage [illegible], [illegible] so as to favour the discharge of pus and sloughs, and to prevent the formation of sinuses.

Should the active antiphlogistic treatment [illegible] any stage of the disease, [illegible] [illegible] of [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] the coating [illegible]. The part [illegible] to its original [illegible], and the incisions which seemed to be most formidable gave [illegible] the greatest

[illegible] appears as superficial and [illegible] covering the skin, [illegible] and [illegible] deposits have [illegible] lower down, the strength of the patient must be supported during the long and [illegible] fever, by which the [illegible] of extensive suppurating surfaces are [illegible] and if the stomach will bear it some [illegible] nourishing, such as [illegible] or an allowance of wine and water, with opiates to allay irritation, then become proper; and the first accidents happily surmounted, if diarrhœa and [illegible] the [illegible] good, [illegible] do all.

Enough has now been said in regard to the treatment of phlegmonous [illegible] to the disease when affecting the [illegible]

[illegible] in the[illegible] cases in which [illegible] is [illegible] appears [illegible] at an early stage of the [illegible] the very best [illegible] and [illegible] generally [illegible] adequate to the [illegible] the disease. [illegible] which has been spoken of in the [illegible] especially useful in the latter stages of the disease; it is a valuable remedy in the [illegible] which is attended with less acuteness in the symptoms generally, but with a much greater degree of [illegible] ing than usual. I have not attempted to give a minute and [illegible] detail or [illegible] do I [illegible] any thing [illegible] still, beyond the simple computation of a few facts connected with the disease, [illegible] that [illegible] may give as much satisfaction to the faculty as it gives [illegible] to [illegible] them.

An

Inaugural Dissertation

ON THE

Subject Of

Pericarditis

Submitted to the examination of

the

Provost Regents

and

Faculty of Physic

of the

University of Maryland

For the Degree of

M. D.

BY John Silas Marshall OF

Maryland

Session 1852 - 3

Gentlemen of the Faculty

The rule of the medical department of the University of Maryland which makes it incumbent upon each candidate for the degree of M.D. to deposit with the Dean of the Faculty "a thesis of his own composition on some subject connected with medical science" obviates the necessity of any apology for the following observations upon the subject of

Acute Pericarditis

or Inflammation of the Pericardium

This affection though very important and of frequent occurrence was until recently but little known to the medical profession. Pericarditis endocarditis carditis and valvular disease were strongly confounded with each other and even the existence of any form of disease of that organ could not

be positively ascertained. Even the illustrious discoverer of auscultation failed to make a practical application of his system. He admitted that he could not discriminate positively between pericarditis and endocarditis and until the time of Louis the profession had no clear ideas of this affection. To him is due the credit of having first pointed out some of the most important diagnostic symptoms though many others have added materially to our knowledge of the subject and it is now comparatively an easy matter to ascertain the presence of the disease and to separate many of its symptoms from those of the frequently coexisting affection endocarditis.

Judging by the result of the numerous post-mortems made in the French hospitals it would appear that of all persons who die at an adult age about one in twenty-three exhibit unequivocal evidence of having been the subject of this affection

But it must be recollected that these examinations were made upon persons in the very lowest ranks of life. Persons who from their habits and mode of living are necessarily more exposed to the causes of that affection than are the majority of persons in this country and as far as my own limited opportunities of observation will warrant me in forming an opinion I am inclined to think that the estimate somewhat exceeds what it should be in the United States

Anatomical Characters. Whatever may be the first changes that take place in the pre-cardiac the first alteration from the normal condition detectable by the knife of the pathologist is redness either in points lines or spots of a fractured or patched appearance

The presence of redness however must not be taken as positive evidence that inflammation has existed as it may be cadaveric or the result of congestion. We should on the other hand be too hasty in concluding that

inflammatory action has not been going on because redness can not be detected as it may have disappeared after death as exceptionally red veils sometimes does a result which is not apt to occur in persons of a strumous constitution.

Very soon however after the commencement of the attack we have other evidence of the inflammatory character of the affection in the effusion of serum or coagulable lymph or both.

The serum which is generally effused early in the disease is of variable quantity sometimes not exceeding a few ounces and in other cases amounting to several pints and though sometimes limpid is generally tinged of a yellow or greenish tinge and is sometimes largely mixed with blood. I have spoken of the fluid found in the pericardial sac as serum. This as a general thing is the fact But it is not always so as it is sometimes found to be sero-purulent and cases are

mentioned in which it seemed from the first to have been nearly free from fluid. Before death however we have no means of determining what this fluid may consist of. There is a flood of information which can only be obtained when such knowledge can be of no avail I mean by a post mortem.

The lining of effused lymph varies according to the stage of the disease from the most delicate film to an inch in thickness and exhibits at all times a remarkable roughened reticulated appearance which may be very well illustrated by bringing into contact and then separating two layers of butter or lard spread upon some solid body. In one case which I saw the reticulating pattern of the membrane very much resembled that state of the skin termed "cutis anserina". This irregularity is now universally conceded to be caused by the contact and separation produced by the

systole and diastole of the heart Sometimes the effusing surfaces are found connected by slender bands of lymph which have been drawn out into that shape by the action of the heart

This lymph which when first thrown out is a soft homogeneous substance soon takes on a new action Red points and lines are seen running into its substance and forming a true vascular connection with the the surface to which it adheres becoming thus a part of the living organism

If the surfaces thus coated are allowed to come in contact adhesion takes place and the sac is obliterated But generally this result is for a while prevented by the serous liquid effusion which distends the sac and keeps its walls separated But though adhesion may for a while be prevented it is very certain at a later period

in the disease to be accomplished when the fluid being absorbed leaves the exudate surfaces to be brought to apposition. After adhesion has taken place part of the new matter is removed by the absorbents and the remainder is converted into a sort of [illegible] which very much resembles the normal tissue of the body and the recovery appears to be complete. But in many instances this will prove to be fallacious for although the patient cannot be again attacked by the same disease the changes already produced will be found to be the efficient cause of many future evils.

The muscular substance of the heart is not unfrequently affected in cases of pericarditis and also the endocardium. The changes produced being with regard to colour consistance or bulk being either paler or deeper coloured softened or hardened enlarged or diminished. We have no means however of ascertaining the existance

of this so called complication and although the power of discriminating would be a source of satisfaction to the practitioner as a piece of scientific knowledge it is of but very little importance in a practical point of view as the indications for treatment are the same in either case.

Symptoms Here we are met in the end set by the question that there is no set of general symptoms upon which we can rely for a diagnosis This in its most extended sense is no doubt true yet taken in conjunction with the auscultatory signs they serve as valuable auxiliaries in enabling us to reach a correct conclusion

The onset of the disease is generally marked by the occurrence of a chill (though some times this is absent) which is followed by febrile action and in the course of the disease we have more or less of the following

symptoms therefore I may enumerate pain or other uneasiness as a sense of oppression or weight in the precordial region with excessive action of the heart quick and frequent or irregular pulse violent pain in the head with occasional delirium The respiratory system is generally much affected there being cough with hurried and difficult breathing

To the above list may be added dysphagia nausea and vomiting a choice for certain positions and great muscular debility with attacks of faintness The countenance of the patient is expressive of great anxiety and there is sometimes a considerable amount of edema

These symptoms are extremely diversified in character and very irregular in their occurrence and manifestations

Pain as a symptom cannot be relied upon. Very often entirely wanting and at other times being merely a dull aching or undefinable sen-

sation aggravated by pressure over the left side of the chest by coughing or by a deep inspiration. Frequently however severe pain exists and is felt over the precordia between the shoulders and in the left arm extending down as low as the wrist or even to the ring finger. The uneasiness is sometimes felt mostly in the epigastrium and in these cases the head seems principally involved. This latter fact should put the practitioner upon his guard as he may otherwise be lead to overlook the real seat of disease. The pulse. As soon as febrile action is fully developed the pulse becomes disordered being increased in quickness and frequency beating at the rate of one hundred and ten a hundred and twenty or a hundred and thirty in the minute and though generally full and strong is sometimes early in the attack small and

recorded later in the disease however it frequently becomes very irregular sometimes intermissions occur but the change is more generally with regard to frequency often beating with extreme quickness and frequency for a short time and then falling into the opposite extreme and a still later period in the affection it becomes so small and weak as to be almost imperceptible at the wrist Various reasons have been assigned for this debility the principal one advanced being the effusion of serum and lymph which is supposed to act mechanically by cramping the hearts action But I cannot understand how the surrounding serum could prevent the hearts contraction and as for the lymph it certainly can not exert any influence in that way until adhesion has taken place and then the patient should be convalescing.

bough as a symptom of the disease is it is of but little importance not being constant. It is more generally present in cases complicated with pleurisy or pneumonia. It is dry or moist according as the disease is or is not complicated.

The respiration is in general much hurried being thirty forty or even sixty in the minute and is very often so much disordered as to amount to severe dispnoea. This in the early part of the attack is probably depending upon nervous derangement but in the latter periods is mostly owing to the distention of the pericardium by a large amount of fluid which presses upon the lungs.

Dispnoea from this cause will be slight or severe exterior harbour according as the fluid has been slowly or rapidly effused. When the accumulation is copious and has taken place suddenly the difficulty of breathing is

so excessive as to constitute true orthopnœa the patient being compelled to sit up with her body inclined toward the left side

The dysphagia cough and vomiting and the peculiar expression of countenance are in general the manifestations of disordered nervous action

Œdema is not a common symptom in this affection When occurring it generally first manifests itself in the lower extremities and is supposed with a great deal of probability to depend upon the venous congestion superinduced by the imperfect action of the heart

The blood when drawn exhibits the usual characteristics inflammation

Having thus briefly and imperfectly spoken of the most prominent and valued of the general symptoms I shall now take up the consideration of the

Auscultatory Signs Under this head

should be classed not only the sounds heard when the ear is applied to the surface of the body but also those elicited by percussion. All writers as far as I am aware have arranged these two method of examination under different heads but as the information obtained by percussion is only appreciable by the understanding by means of the sense of hearing I have thought proper to consider percussion as merely a form of auscultation

These symptoms consist either in modifications of the normal or the production of abnormal sounds. With regard to the alterations in the natural s[illegible] there is not much to be said. In the begining of the attack when the muscular substance of the heart is irritated and before any effusion has taken place the only intelligence to be gained is that the organ is acting with preternatural

force and rapidity the first and second sounds being much louder and distinct than in the normal condition This usually continues for two or three days and then more or less gradually becomes fuller and indistinct as serum begins to be poured out distending the sac and pressing the heart away from the interior walls of the chest During this early stage however we often have another sound developed vastly more important than the preceding I allude to the to and fro or friction sound These sounds first described by Dr. Collin are supposed to be produced by the rubbing together of the glossy pericardial surfaces which are roughened first by the congestion of its vessels and afterward by the effusion of plastic lymph and it has been supposed that the dryness produced by the commencing inflammation may have some agency in its

production These sound are synchronous with those of the heart being generally double Some have supposed that two additional sounds are sometimes produced by the contraction and dilatation of the auricles This however seldom occurs The are well marked or indistinct according to the strength of the hearts action the roughness of the surfaces and the closeness of apposition between the adherent and reflected portions of the membranes This sound has been compared to that produced by rustling of a piece of parchment It has also been called the creaking leather sound from its fancied resemblance to that produced by that article but to my ear it is better imitated rubbing together two pieces of india rubber than any thing else that I am acquainted with As the disease advances serum is thrown out in considerable quantity the friction

sound is lost the respiratory murmur of the intervening stratum of lung disappears and by the ear alone we can hear nothing but the distant natural though laboured cardiac sounds But by the aid of percussion we can obtain some valuable information for instead of the normal limited and imperfect dulness we now have a much more extended surface upon which our stroke gives back no echo Instead of the semi-resonant emitted in the natural state it is now completely dull or even perfectly flat or as one of the earlier writers expresses it "tanquam percussi femoris"

It has been stated that a sort of rustling or churning sound may sometimes be heard This it is obvious can only be produced when there is at the same time a quantity of air or gas in the sac

In young persons where there is a large

amount of fluid the pericardia is often usually distended the intercostal space being forced out even with the ribs but in general the eye does not give us much information

In many cases where the friction sound is heard it is somewhat difficult to distinguish it from the bellows murmur of endocarditis In this case the practitioners own judgement must be the principle means of enabling him to detect their origin as there can be no positive rules given by which to make a diagnosis By placing the hand over the pericordia when this sound exists a peculiar thrill may often be felt which circumstance would make it very probable that the sound was pericordial The assertion of Dr. Latham the friction sound may in general be heard although there may be a large amount of serum

present requires to be better investigated before being fully received by the profession I cannot see why it should exist under such circumstances but on the contrary there seems to very good reasons why it should not

As the disease advances and if it takes a favourable turn the effused liquid is absorbed the dulness gradually disappears the natural cardiac sounds are again heard in their normal situation and the friction sounds previously lost in consequence of effusion may very often be again detected for a brief period but for a brief period only for a adhesion soon takes place and the condition upon which it has depended no longer exists

When these sounds have followed the above described course and then dis-

appeared we may infer that such adhesion has taken place but we cannot positively declare that such is the case

Sometimes adhesion does not occur the secreted lymph being absorbed and the membrane left in the natural state These are the only cases of true recovery

Duration With regard to the time usually occupied by this affection before terminating in death or recovery it is somewhat difficult to make a precise statement In the majority of cases the disease under active and proper treatment takes a favourable turn in a week or ten days and the cure is accomplished in three weeks or less It may however terminate fatally in thirty hours or it may be prolonged for several weeks sometimes assuming the chronic form

Causes All agents capable of producing inflammation in any part of the body may be the cause of pericarditis Among these may be mentioned exposure to cold and moisture the retrocession of eruptive diseases suppression of habitual discharges the free use of alcoholic stimulants strong mental emotion and mechanical violence But the cause which of all others most frequently produces this disease is rheumatism It has been calculated by European writers that one half or even three fourths of all persons attacked by acute or subacute rheumatism are affected by pericarditis or endocarditis either conjointly or seperately Much difference of opinion however exists with regard to the frequency of this complication it is very probable that in the crowded cities of Europe where a large portion of the

population are living in a state of abject misery and who do not receive proper attention when attacked by rheumatism this affection may more generally occur than it does in the United States. Another reason for these conflicting statements may be found in the fact that pericarditis is more apt to be developed in the course of rheumatism at some periods than other. Physicians practising in this city are daily meeting with cases of rheumatism in which no cardiac involvement can be detected but during the extreme prevalence of that disease — the spring of 1852 the heart was affected in a great majority of cases. I have no statistics of the subject at hand but the impression upon my mind is that of all persons brought into the Baltimore Infirmary during that period labouring under rheum-

alism at least three fourths suffered from this complication

Under the head of predisposing causes may be ranked age sex constitution the previous existance of other diseases the rheumatic and gouty diatheses and hypertrophy and dilatation of the heart. among these the most prominent is age being most likely to attack persons between eight and thirty-five Males are more generally attacked than females probably because they are more exposed to its causes It is also more frequent in robust than in delicate persons

Diagnosis The diseases from which we have to discriminate pericarditis are endocarditis pleurisy pneumonia and pleurodynia From endocarditis it may be distinguished by the friction sound the dulness on percussion the absence of the rescular murmur the distance of the cardiac

sounds the prominence of the chest the purring thrill and the want of the bellows murmur It differs from pleurisy in the position and precise outline of the dulness The friction sound also furnishes us with a valuable means of diagnosis for if it be cardiac it will not be interrupted when the breath is held as it is in pleurisy · Egophony does not exist From pneumonia it may be distinguished by the absence of many of the characteristic symptoms of the latter disease as the rusty sputa the bronchial respiration and bronchophony and the fine crepitation of the early stage Pneumonia is moreover without the friction sound or the bulging of the intercostal spaces and the cardiac sounds instead of being distant and feeble are more distinct than usual

Pleurodynia has none of the auscultatory symptoms of pericarditis and is also generally deficient in most of the general signs of this affection such as chill fever the expression of countenance peculiarities of pulse faintness or edema

In cases complicated with any of the above affections the diagnosis must be made out by a careful attention to or comparison of the general with the auscultatory symptoms of each disease

<u>Prognosis</u> This as far as the immediate result is concerned is in general favourable being in the majority of cases of no great severity and most likely would terminate in recovery without any treatment and it is only when complicated with pneumonia pleurisy or organic disease of the heart that it becomes very dangerous The signs of great danger

are an irregular and frequent pulse a large effusion into the pericardial sac severe dispnoea and a livid or dusky hue of the face indicating that the due aeration of the blood is interfered with

When the disease terminates in recovery it is either by resolution or adhesion This latter form is favourable only with regard the immediate result though not as bad as was formerly supposed Those who are disposed to take the most unfavourable view of its termination contend that in consequence of this adhesion the heart will be compelled to make a strong effort to contract with sufficient force to send the blood in the requisite quantity to distant parts and that this increased action will require increased nutrition and that consequently hypertrophy with its long train of evils will ensue. This

indeed is very likely to be the result when the stratum of lymph is of such thickness that it can not be perfectly organized but is converted into a fibro-cartilaginous envelope But in cases that have been subject to early and active treatment recovery (and adhesion) generally takes place before the coating of lymph attains such a thickness as to endanger this result

<u>Treatment</u> When occurring in persons of a good constitution and the patient is seen early in the attack the most important remedy that can be employed is bloodletting both general and local care being taken however to not bleed to such an extent as to endanger violent reaction as this would effectually defeat one of the objects in view that of quieting the heart's action It has been recommended

ed to bleed beyond the point of reaction.
The advocates of the plan contending that the patient has a better chance of recovering without collision taking place. But this seems to be creating a real danger for the purpose of avoiding one which may be altogether imaginary.
The quantity of blood to be taken must be regulated partly by the constitution of the patient and his previous health but principally by by the effect of the bleeding on the pulse and the blood should be allowed to flow until a decided impression is made upon it. From twelve to twenty fours ounces will generally be required for this purpose and the operation may be repeated two or three times if the strength of the circulation demands it. When its repetition is not deemed advisable eight or twelve ounces may be taken by means of cups

applied over the region of the heart

Cathartics are also useful in this disease they should be given at first in a sufficient dose to procure at least two or three evacuations from the bowels and afterward continued so as to keep them open once daily The best articles for this purpose are calomel followed by castor oil the compound cathartic pill and infusion of senna with Epsom salt

As soon as the cathartics have operated freely and the pulse reduced by depletion the next remedy to which we should turn our attention is the use of mercury which should be pushed to the point of slight ptyalism but severe salivation should not be aimed at In cases where bleeding is not well tolerated this remedy is even superior to the lancet It should always be combined with opium This combination fulfils two very important indications first by obviating

the cathartic action of the mercurial thus retaining it in the system and secondly by restraining the violent action of the heart and rendering it insensible to the irritation

Whilst the fever is high and the stimulant action of the opium would be injurious Ipecacuanha or Tartar emetic should be given in conjunction with it

When the essential action is at rest, induced in this way it should also be used externally either by rubbing the mercurial ointment into the skin or by applying it to a blistered surface The inhalation of the fumes of cinnabar has been recommended when the above plan fails The mercurials are beneficial both by their powerful antiphlogistic action and also by their power to stimulate the secretory system thereby promoting the absorption of the effusion The impression should be sustained until convalescence is fully established

When there is a hot and dry skin the effervescing draught neutral mixture nitre or the antimonials will be found useful The daily use of the hot foot bath should also be employed

After effusion has taken place and inflammatory action has been somewhat subdued blisters applied over the precordia will be found very useful and if the symptoms continue they may be reapplied as soon as the surface heals

When the disease is of rheumatic or gouty origin colchicum will be found to be one of our most efficient remedies and when the pulse is frequent and irritable may be given in conjunction with digitalis

In cases of great nervous irritation the narcotics may be exhibited with benefit Hyoscyamus conium aconite hydrocyanic acid and camphor have been used for this purpose.

Regimen With regard to the regimen perfect rest physical and mental should be observed during the course of the disease.

The diet should be farinaceous or mucilaginous and small in quantity. Refrigerant drinks should be given and all animal food avoided.

Having thus brought my task to a close I respectfully submit it to the consideration of the —

Provost Regents

and

Faculty of Physic

of the medical department of the University of Maryland

J. C. Marshall

Session 1852-3

An Inaugural Dissertation

On Puerperal Fever

Submitted to the Examination
of the
Provost Regents and Faculty
of Physic

of the
University of Maryland

for the
Degree of Doctor of Medicine
by
Winslow D. Nogel
of
Pennsylvania

Mean by a violation of the moral law inherited, not only moral but physical disease, suffering, and death; Hence it becomes essentially necessary, that proper means should be used for the amelioration and cure of disease, & prolong life. Therefore the practitioner of [illegible] should be amply qualified for the arduous and responsible station that he occupies; always having in view, his moral obligations and responsibility when he becomes the guardian of the health of a community.

The diseases of our country are multifarious, diversified, and complicated and among them there are probably more that claim the attention and sympathy of the Physician more than Puerperal Fever. I shall therefore confine my remarks on the present

occasion, to a brief history of the causes, symptoms and treatment of this painful and dangerous malady. Though it is not of Medieval but ancient origin, one epidemic succeeding another, has been prevalent since the first introduction of Medical science. Perhaps no other disease in the annals of Medical history, has been more fatal at different periods, according to the number coming under its influence, than has Puerperal Fever.

In its

epidemic and contagious form it carries dismay to every pregnant female within its baneful influence, nor should we be surprised, at its, producing such an effect, when we duly consider the mortality of this dangerous disease. The sporadic form of Puerperal

Fever is much milder than the epidemic or contagious, yet it is not devoid of its dangers, and very often our efforts, and greatest skill are baffled in the subjugation of this formidable disease, It is however the milder form, and more under the control of proper remedies.

One probably of the most common causes of epidemic puerperal fever is a peculiar condition of the atmosphere, having a predisposing tendency to generate inflammatory disease, In the sporadic form, it has been attributed to alteration or suppression of the Lochia, portions of retained placenta, severe pressure and long continued labour, It may however, arise from contagious epidemic, or endemic causes, singly or combined

This disease [illegible] is
to [illegible] prior to delivery, but
such a condition exists, it may
be regarded, as generally very unfa-
vourable in its termination. One
case of this character came under
my observation some two years sin-
ce. But with such remedies as
the case demanded it appeared
to remain nearly stationary until
after delivery, when it assum-
ed the most formidable character,
and resulted fatally.

Puerperal Fever is essentially an
inflammatory disease of the peri-
oneum involving the uterus and
its appendages, and when depend-
ent on epidemic causes or conta-
gion the veins of the uterus are
involved, the blood becomes lik-
ewise in [illegible] not [illegible]

and sympathetic to the whole system as evinced by the rapid prostration of the vital powers.

The Diagnosis in well marked cases is generally easy, it is only in the primary or latent stage that there is any difficulty. In these instances it may be mistaken for severe afterpains, Hysteritis, or fever, arising from the secretion of Milk in the breasts. But the following symptoms will generally characterize the disease, either in the commencement or when further advanced. Severe lancinating or dull heavy pains in the bowels, sometimes passing from the groin down the thighs, legs and extending over more or less of the bowels. These symptoms may, or may not be preceded by a chill or

rigors, in some cases they have been known to last for several hours whilst in others, they have almost, if not entirely wanting; after the subsidence of the chill Pyrexia makes its appearance, or in cases not preceded by the cold stage, Fever is present as a natural consequence of the disease.

The febrile action in the sporadic form is generally of an aggravated inflammatory character, denoted by a frequent, full, hard, or wiry pulse, often numbering from one hundred and twenty to thirty pulsations per minute; skin hot and dry, constant thirst for cool drinks; with more or less tenderness over the bowels. When the disease is fully established the tenderness upon pressure over the bowels is

very distressing, the weight of the wound, or bedclothes, being sufficient to produce intense suffering. In the forming stage the tenderness will most generally be found occupying the Il. iac region or uterus, and sometimes occupying other portions of the peritoneal covering of the bowels. Flushed face and pain in the head are likewise attendant symptoms. The tongue is usually covered with a white or yellowish fur, although I have seen it red and dry with little or no coating upon it. When the febrile action is of a low type instead of a hot dry skin there may be profuse perspiration, frequent small compressible pulse, great prostration of strength, with sensation of sinking.

Constipation of the bowels is a very frequent attendant, but not an invariable one; diarrhoea being present in some cases from the very commencement, so that we may have either condition of the bowels in the primary stage. Nausea and vomiting generally accompany the early stage. The matter ejected, is of a greenish or yellowish appearance. The lochia is more or less deranged, and not unfrequently entirely suppressed. The secretion of milk should it have taken place is often suspended. The urine is scanty, high coloured, and often voided with pain, and difficulty. This disease terminates in resolution, effusion, or gangrene; when the pulse becomes more frequent,

rising from one hundred and forty to sixty pulsations per minute, with extreme prostration, the surface covered with a cold clammy sweat, singultus, subsultus, convulsions, the abdomen tense hard and tympanitic, the case may generally be regarded as portraying great danger. But when the pulse becomes less frequent and soft, thirst diminished natural perspiration reestablished, a return of the lochial discharge with a gradual abatement of the abdominal swelling and pain, he may confidently hope and expect a favourable termination of this formidable and dangerous disease.

In the treatment of Puerperal Fever the practitioner

must be guided entirely by the variety and stage, as well as the predisposing cause of the attack. Very different plans of treatment are recommended and extolled by various authors. But to be rational and successful in the treatment it must be adapted to the indications in the individual cases. In the sthenic form blood should be drawn from the arm in a large stream, the quantity taken must be regulated entirely by the constitution of the patient, the stage of disease, and condition of the pulse. Should the case be seen early as during the forming stage, and the pulse be full, frequent, and hard, not easily compressed, with head ache flushed face and vigorous constitution, the quantity should be copious; at all times when

bleeding is required it should be carried so far as to make a decided impression on the system. Should the pulse and excitement of the system rise in a few hours, venesection should be resorted to a second or even third time. But in this repetition we must be dependent upon the inflammatory character of the case and constitution of the patient. Topical bleeding, by means of cups over the bowels, is often a valuable auxilliary means in subduing the disease, and may be resorted to as often as the nature of the case appears to require it. As soon as venesection has been attended to, the condition of the bowels should be looked after, if constipation exists a full dose of Calomel and Rhubarb or Jalapa should be given and followed

in a few hours by a dose of Castor oil should it fail to operate suffic-iently. But if diarrhoea be present and we suspect that excrement that ter is still retained in the bowels, a full dose of Castor oil will be a prof-er cathartic. After the undue excitement of the system has been sufficiently subdued by venesection and cathartics, Calomel in combi-nation with Opium in some one of its forms should be used, to which sma-ll doses of Ipecac may be added, and this course continued until the disease is checked or slight Ptyalism is induced, when the Mercurial as a general rule should be withdrawn. Opium should be used freely after the inflamma-tory excitement has been somewh-at subdued, and continued un-til the pain is fully relieved.

should further purgation be necessary, let tonics or stimulants be prescribed such as castor oil, linct. Opium, or sedative powders, repeated as often as the nature of the case seems to demand. Fomentations over the bowels are generally advisable as auxilliary means. They should be light and often renewed, and continued as long as they seem to be of decided service. Flannels dipped in warm spirits of Turpentine sometimes prove of vast service, when applied to the surface of the abdomen. But should they in connection with the other means advised prove insufficient to subdue the inflammatory action; Blisters should be resorted to, and applied so as to cover as much of the inflamed surface as possible.

and the Lochia be suppressed, early attention must be paid to this discharge, and proper remedial agents should be used to excite a return. For this purpose mucilaginous injections, as what I have found admirably adapted, when the discharge becomes altered in quantity and quality, with a fetid odor, is a decoction of Anthemis Nobilis repeatedly injected, say from three to five times per day. When convalescence begins to take place, and there is considerable debility. It will be proper to make use of some of the milder Tonics, such as the Infusion of Quassia, Serpentaria, or Gentian, with some aromatic, or recourse may be had to small doses of sulphate of Quinine, or Aromatic sulphuric Acid.

In connection with this, light nutritious diet, and such should be selected as would be easily digested. In the treatment of Malignant Puerperal Fever the remedies must be adapted to the emergency and stage of disease, and so varied as to fulfill the different indications as they may arise in the course of the disease. In this form of the disease active depletion would be followed with disastrous effects, the vital powers already greatly enfeebled and depressed, would sink still lower, and death would be the inevitable consequence, in the majority of cases. In the onset the bowels should be unloaded by an aperient, or small dose of Calomel, followed in a few hours, by Castor oil, or Rhubarb and Magnesia, should it fail to operate sufficiently;

[illegible] as [illegible] [illegible] [illegible], though in some cases very small doses of Castor oil in connection with Turpentine should be used, and are not only admissible but beneficial; whilst at the same time Turpentine should be used freely to the abdominal surface. In the management of this form of the disease our reliance must be principally upon Tonics, and Stimulents, in connection with the foregoing means. As a tonic in this particular form of the disease Quinine holds the first place and may be used in the very earliest stage, alone or conjoined with other remedies. Opium or some one of its preparations are indispensible in the management of this variety of the disease, and may often be combined with the Quinine to advantage. When the powers of the system begin

to sink - recourse must be had to the diffusible stimulants such as Wine or Brandy, or carbonate or Aromatic Spirits of Ammonia, and Nutritious Diet. In one case the patient should be strictly watched, and lest being guarded against as far as possible. Indeed remedies but too often prove abortive and insufficient when this fearful and often fatal Malady assumes this character. When effusion takes place the case cannot be regarded in any other light than that of almost entire hopelessness; nor is gangrene less to be feared, either are almost certain precursors of a fatal termination. Still our efforts should be relaxed only, when death is inevitable. When it reaches either of these stages the probability is, that no remedial agent will accomplish more than mere palliation, some patients indeed is often

the last sorrowing balm we have left, and whilst we feel conscious that we are divided from all other by mortal sorrow, her pathway to the tomb, the bar to which all mankind are bound, we submit to that power, that rules with wisdom.

Gentlemen

with this brief and imperfect history, I submit this essay to your examination, conscious of its many imperfections, and permit me to subscribe myself yours with all due respect.

W. T. Rogers

An
Inaugural Dissertation
on
Diagnosis

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Provost, Regents
and
Faculty of Physic
of the
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for the degree of
Doctor of Medicine
by
Richard H. Brown
of
Maryland

1853

"Diagnosis. – Diagnosis. Diagnosis"

Pöhn

"Diagnosis" says Chomel "is that part of pathology whose object is the discrimination of disease". It is most conveniently arranged under two heads viz. General and Special, relating respectively to classes of disease, and to particular cases. Any detailed account of the latter would be almost impossible in an essay like the present, and the remarks which follow are intended to apply only to the first named variety.

Better described than defined, there is probably no single branch of equal importance with that which relates to the diagnosis of disease, the great value of which must be perfectly evident to every one who has devoted to it the slightest share of attention. Connected so closely with all the other branches of medicine, and especially with prognosis and therapeutics, it claims especial consideration at the hands of the profession, and promises richly to compensate the study which may be bestowed

upon it. Within the last half century quite a revolution has taken place in the minds of medical men in relation to its importance, and that department of which at no very distant period, so little was known or thought, now holds a most lofty position in the science of medicine, and constitutes the chief subject of investigation for many observers. This is in a great measure due to the exertions of the modern French school of physicians, who have labored so faithfully, so successfully, and so exclusively in this department of pathology. If we consider the importance of correct information on this subject, we shall not be slow to see the immense debt of gratitude which the medical world owes to this untiring body of men.

Diagnosis may very safely be said to constitute by far the greater portion of the foundation of rational prognosis and therapeutics. No one can venture to predict with certainty, the event of a disease of whose nature he is ignorant, neither can he hope for much success in his treatment, while he is a stranger to the character of the morbid action against which that treatment is directed. In this consists the difference between rational and empirical practice. The latter, trusting with the credulity of ignorance to the effects of a certain specific

against a certain group of morbid phenomena, is unable to account, either for the symptoms, the medication, or the result. The former, considering all the circumstances of the case, direct or indirect, can explain the nature and seat of the disease, and by the use of reasoning and observation, can tell the treatment indicated, and the result to be expected.

There are many cases of disease in which the physician derives almost all his knowledge of the probable duration from the diagnosis. In this class may be placed those known as self limited diseases, together with the large number that incline in the great majority of instances to run a certain course, and terminate within a certain period. Here, the accuracy of his diagnosis being once established, the practitioner may safely venture to make a prognosis contrary to that which the symptoms might seem to indicate. And again, as to the ultimate event, it is not of less value. Many diseases have a tendency in a vast majority of cases to terminate spontaneously in health. Many others are more likely, especially when they prevail epidemically, to have a fatal conclusion;

and unhelping, are almost excluded from hope of ultimate relief after the inception of the disease. In these last cases therefore, all the patient's prospects of life are based upon the hope that the medical attendant may have committed an error in diagnosis, and this is constantly occurring in the practice of medicine. Diseases little alarming when understood, are mistaken for fatal ones, and unfortunately the opposite error of supposing a dangerous case harmless, is too frequently fallen into. Any one who has watched the progress of Pulmonary Phthisis or of Cancer will certainly perceive in what intimate relation diagnosis, and prognosis stand to each other.

It is however to therapeutics that diagnosis is most closely allied. Here we learn fully to appreciate the necessity of accuracy in the observation of facts, and judgment in their application. Here we are forced to acknowledge the great value of all those circumstances that aid in the formation of diagnosis. The same division may be made here as above. The medication is of course widely different in cases which are known to terminate almost certainly in health, or almost certainly in death; And

those whose course and termination will in the great majority of instances be determined by the medical influence which may be thrown around them. In the former, the only indications are to relieve the unpleasant symptoms that may arise. In them medicine is emphatically the handmaid of nature, and frequently performs but an unimportant part. In the latter, the interesting and terrible struggle for the mastery between life and death is going on, and the art of medicine is very generally the arbiter of destiny. Upon the treatment depends the life of the patient, and the character of that treatment must be derived in great part from the opinion which the physician may have formed of the nature and seat of the disease. There is a class of cases that perhaps better than all others demonstrates the important relation of diagnosis to therapeutics. We allude to those in which the symptoms would seem strongly to indicate the presence of inflammation, and which are yet owing merely to irritability of the nervous centres. Here the inexperienced observer would in all probability adopt a course of treatment perfectly sanctioned by the seeming circumstances of the case, and yet in reality this would be exactly the reverse of

that is required.

As an agent for the detection of feigned and concealed diseases, the value of diagnosis has long been recognized. Upon it in many instances depend the lives, happiness, and honor of individuals; as well as the interests of society, and the administration of justice: the regard for his own reputation at least, calls on the practitioner to prepare for these emergencies.

But a more important consideration is its relation to medical truth. Upon its accuracy depends the value of all the information we have derived from preceding observers, and to its imperfections, more than to any other cause are due the "false facts of medicine". Once correctly established, the premises remain unaltered even though the deductions be incorrect, and they serve as the starting-points for renewed investigations. From errors of diagnosis have arisen very many of the baseless theories which have impeded the progress of our science, while to its correct exposition is due the immeasurable superiority of modern medicine. We cannot close this portion of our subject better than by quoting the language of Louis: "The

science of diagnosis is the most important, most useful, and most difficult of all the divisions of medical science. "The discrimination of the peculiar nature of each kind of disease, and of its different species, is the source of curative indications. Without an accurate and precise diagnosis, theory is ever at fault; and practice often unfaithful".

"The circumstances from which the physician forms his diagnosis, are very numerous and are derived from a variety of sources. In consequence of this diversity, certain qualifications on his part are absolutely necessary and others are of scarcely less importance. These we will briefly examine before passing to the farther consideration of the subject.

On the part of the diagnostician there is always presupposed, a thorough acquaintance with the physiological actions and peculiarities of the organ or structure whose morbid condition he may be investigating. This knowledge must of necessity precede all other, and when he has attained this, the observer only possesses the mere foundation for more important acquisitions.

In addition to this physiological information, and of even greater importance, is a correct and thorough acquaintance with pathology. The different forms of diseased action to which each organ is subject; the causes likely to favor the production of that action; the mode of access, the course and ordinary terminations. The symptoms indicating its presence; the changes usually produced by it: these together with numerous other circumstances constitution, the broad field of pathology, are of inestimable value to the diagnostic physician, and without them he can never reasonably hope to attain any considerable perfection in this department of medicine. This knowledge of pathology may be either theoretical or practical, and however some may affect to despise either of these modes of acquiring information, still the unbiased observer will admit the great value of both, which indeed can seldom be advantageously separated. When to a correct theoretical knowledge, the physician can add the fruits of his own observation and experience, then and not till then, may he safely venture to rely upon himself.

There is one circumstance which must always have great weight in the formation of the diagnostician, which is the power of observing, and collating facts, and of drawing correct inferences therefrom. This constitutes one great difference between physicians, and although a great degree of proficiency may be attained by careful study, yet from this peculiar adaptation of mind, some will always excel even their more studious brethren. But setting aside even this seeming inspiration, the elements of diagnosis are alike open to all, and by attentive observation of the great truths of nature, the physician may in the vast majority of cases, make a proper and rational decision.

There is another requisite that must exert a decided influence on the value to be attached to the labors of any observer. This is freedom from prejudice. He must bring to the prosecution of this branch of pathology, a mind unbiased by preconceived opinions, unaffected by the seeming plausibility of mere speculative reasoning. He must divest himself of every hypothesis, however cherished it may be, which

experience have proved untenable: and must rise above every thing liable to interfere with the proper exercise of judgment.

These constitute the principal elements which the physician brings to aid in the formation of his diagnosis, and upon the degree of perfection to which he has carried them, depends the accuracy of his appreciation of those more numerous ones for which he must look beyond himself. Of these latter we shall now proceed to speak.

As we have before said the component elements of diagnosis are derived from a great diversity of sources. To these the term "Diagnostic Signs" has been applied. Almost every circumstance from the inception of a disease, to its termination is a diagnostic sign, and therefore of some consequence, but the importance attached to each one is by no means equal. In this as in other branches of medical science, the value of facts is regulated by the frequency with which they occur, and the relation which they sustain to certain recognized states of system, and from this has arisen the distribution of diagnostic signs into classes.

The arrangement most frequently adopted by authors, and which seems to us liable to fewest objections, is that which places all diagnostic signs in two primary divisions; viz. Positive, Characteristic, or Pathognomonic; and Insufficient, or Equivocal. Besides this division others are also made by different authorities, as into Objective and Subjective; Positive and Negative, &c. but in our feeble judgment these are not possessed of much practical value, as the whole subject appears comprehended in the arrangement above mentioned.

Positive, Characteristic, or Pathognomonic Signs. Very great diversity of opinion exists among medical men in regard to the value of these signs, and some even deny their existence altogether. This has very probably arisen from the wide difference in the definitions which have been applied to them. Others have restricted the use of these terms in such a manner that they shall apply only to those signs, which when taken singly are sufficient to indicate the nature of the disease, which indeed they claim can never exist without the manifestation of its peculiar

sign. This is however too contracted a view. If this stringent rule be adopted, then do we reduce their number in a very great degree, and perhaps abolish them altogether, for there is probably no single one which has been present in every individual case. Yet that there is a vast difference in the value of diagnostic signs, every one must admit, and the only object of a division is to discriminate the most reliable, from those of an opposite character. A pathognomonic sign therefore may be defined to be, one that is peculiar to a single disease, and although absent in some exceptional cases, is present and affords positive evidence of the nature of that disease in the vast majority. In some instances these signs are absolutely necessary for the formation of a correct diagnosis; and in many others, their presence in connection with those of an equivocal nature, is absolute proof of the existence of a particular malady. The physician is not however in every case to be perfectly certain of its nature from the apparent occurrence of one of these signs, for experience has proven that when considered without reference to other circumstances, they may sometimes mislead. Some of them, especially the eruptions of the exanthematous

fevers, are occasionally simulated by appearances springing from different causes, but these may in general be easily distinguished by the accompanying symptoms. Happily for us, we are not compelled in the diagnosis of disease to restrict our attention to these signs as mere isolated entities. Considered in this light, many of them are indeed not to be relied on; but viewed as they occur, in relation with the other phenomena of disease, they afford information of the most valuable description. Unfortunately they are of less frequent occurrence than could be wished, and cannot in some cases be manifest to the observer until after a fatal termination, as the changes in the elliptical patches in typhoid fever, and the granular condition of the kidneys in albuminuria. These characteristic signs have been much increased in value by the addition to their number, of those that have been brought to light by the introduction of physical exploration. A knowledge of the positive signs of each disease will be found to expedite the practitioner very much in forming a diagnosis, as when their existence is certainly proved, there is not often a necessity for the same rigid scrutiny of the patient which

is essential in other cases. At the same time that they indicate the nature, many of them also afford reliable evidence concerning the stage of diseases. The rose-colored eruption of typhoid fever, and the fine crepitation and bronchial respiration of pneumonia, are excellent examples of their utility in this respect. But it is not usually the investigation of these signs that demands such strict preparation and attentive observation on the part of the physician. Sometimes it is true, great knowledge and experience are essential for their appreciation, but in general when once clearly recognized, they are afterwards to be distinguished when present, without great difficulty.

Insufficient or Equivocal Signs. In this class is comprised by far the greater portion of those upon which the observer must depend in the formation of a diagnosis, and though more numerous, they are much less reliable than those of the preceding division. They vary very greatly in the sources from which they are derived, in their mode of manifestation, and in the value

to be attached to them. These signs are to be found in the Age, Sex, Habits, Social condition, and Constitution of the patient: in the predisposing and exciting causes of the disease: in its mode of access and progression: in the effects of the treatment employed, and finally in the symptoms that may be present at the time of examination. Thus it will be seen that every circumstance connected with the patient, both before the commencement and during the progress of the disease, may afford information relative to its nature. From the number of these signs, and the equivocal character of the knowledge afforded by many of them arises the difficulty of forming a correct conclusion concerning the identity of most affections, and the necessity of so much maturity of judgment, and strictness of observation on the part of the physician. The importance of these different signs varies greatly in different cases. Those which may be of great value in one series, are often of comparatively trifling utility in another, and indeed may by their presence only serve to obscure the real nature of the malady, and thus render the diagnosis more difficult.

To assign to each of them its proper position at different times, and to reconcile their seeming incongruities, is a task very difficult to perform, and one requiring the nicest discrimination on the part of the practitioner. Some of them may be apparent to the senses of the observer alone, others can only be obtained by careful examination of the patient or his friends. It is very important in considering these signs, that no circumstance however trifling it may appear be passed by without notice. Many things that would altogether escape the attention of an inexperienced physician, convey information of great value to a more reflecting mind. For instance, the constant dribbling of urine from the bladder in the course of a disease, would seem to one to require no inquiry relative to the existence of distention of that organ, while in another it would immediately occasion fear of this condition. On account of the number of signs to be examined, and the errors that might arise from a neglect of any of them, it is advisable that some system be adopted and adhered to in the investigation of diseases. The advantages of this course are

susceptible of easy demonstration. The attention of the physician is not so likely to be attracted by a few prominent circumstances, (which perhaps bear no fixed relation to the case under observation.) to the exclusion of those which are less evident, but oftentimes more valuable aids. He is better enabled to view the disease in all its bearings, and thus come more easily to a definitive conclusion; and a methodical disposition of mind is induced which is of infinite value in the generalization of cases. We do not wish to be understood however that all these circumstances are to be subjected to the same rigid scrutiny in every case. Frequently the diagnosis is so plainly indicated by a comparatively small number of them, that it would only be a waste of time to persevere in further inquiries. There are also some instances where the imminent danger of the patient, positively forbids all examination which is not absolutely indispensable. But these afford no reasonable objections to the careful examination of all the organs and functions of the system, in the greatest number of those cases that fall under the observation of the physician. Various modes of investigating the character of diseases have been proposed

by different authorities, varying more or less in the manner of execution, but all based upon one general idea, viz. the systematic examination of all the circumstances that may present. The arrangement adopted by Dr Stille, is perhaps as convenient as any that can be followed. He advises that the patient should be first questioned relative to the commencement of the disease, its mode of access, premonitory symptoms, course, the treatment employed, and the probable causes. Following these are inquiries as to the age, constitution, business, hereditary tendencies, previous diseases &c. When all necessary information on these subjects has been acquired, the present condition of the patient may be made the object of attention. Dr S. recommends that an attempt be first made to localize the disease, and obtain as much evidence as possible from the organ or function most prominently affected, and then that the various organs of the economy be interrogated in the following order. The exterior of the body: the muscular system: the nervous system: the digestive system: the respiratory system: the

circulatory system; the skin, and the excretions. Every circumstance connected with these different organisms is in its turn to be the subject of investigation, nor is the physician to pass to another system until each one has received at least a passing notice. This may appear to be a tedious and laborious method of examining a case of disease, but the interests of both the physician and the patient require that every thing likely to afford light as to its nature shall receive attention. Besides this, however disagreeable such a system may appear at first, by a constant pursuit of it, the practitioner soon acquires great dexterity in making his examinations, and seems to appreciate almost by intuition the departure of any function from its normal condition. In considering those symptoms which are of an equivocal nature, great care is often requisite to distinguish the merely secondary or sympathetic, from those that are the direct consequents of a disease. From insufficient attention to this distinction many unfortunate errors have arisen, and too frequently has the physician had the mortification of seeing cases which in his

hounds had appeared proof against medical treatment, speedily recover under the care of one, whose only superiority had consisted in his knowledge of this difference in the nature of symptoms. It may not be ill-timed in the conclusion of this portion of our subject, to refer to the propriety of abstaining from the use of technical language while engaged in the examination of a patient. This is the better course for many reasons. By the use of such phrases when thus engaged the physician may in no small degree defeat his own purposes, for by few, very few of the patients met in the common practice of medicine, will they be understood, and where truth alone is sought, wrong information will be the only result of his pedantry. Other and more cogent reasons might be given, but the benefit to be gained by the use of plain, simple language, will be appreciated by all.

We have casually alluded to the benefits conferred upon the science of diagnosis by the introduction of physical exploration. In perhaps no department of medicine has the discovery and observation of an equal

number of facts, been productive of the same amount of good. Here we have the key to many of those morbid conditions, which before were either not suspected or only approximatively arrived at by the helps of the equivocal signs of disease. The various methods of examination embraced in this division, are in general most appropriate to the diseases of those organs which from their situation cannot be subjected to the investigation proper for others. Some system capable of imparting correct information in these cases had long been a desideratum, and the use of physical exploration as an agent in the formation of diagnosis was exactly suited to supply that want. From its intimate relationships with those organisms which are most essential to the continuance of life, and the truthful character of the knowledge imparted by it, an acquaintance with its different branches is of the highest importance to the medical practitioner. It is best studied under the heads of, palpation, pressure, succussion, mensuration, percussion, and auscultation. Each of these will be briefly

considered.

Palpation, which is not to be confounded with pressure, consists in the application of the hands to the patient's body. It is used chiefly to detect the presence of gases, liquids, or tumours in cavities; the enlargement or induration of glands, and the occurrence of suppuration. It is often exceedingly useful where either of these conditions exists, and is well worthy the regard of the physician. In most cases where palpation is being made, it is better that the hand be applied immediately to the surface, but sometimes for obvious reasons it is advisable that a light garment intervene. In examining a patient in this way, the hand should first be applied to parts which are free from disease, as a more just appreciation can thus be formed of the degree of departure from health. When employed to determine the existence of abdominal effusion, one hand is to be placed on the side of the abdomen and a gentle blow is struck with the other on the opposite side, when the vibration of the fluid is distinctly

felt if this condition be present. With slight modifications this manner of making palpation is well adapted to the examination of joints, and of abscesses. The hands may also be applied evenly to the surface, as to the chest when the degree of vocal tremor is to be examined.

There is a variety of palpation to which the term "Touch" has been applied. This however is only used in the exploration of the rectum, and of the genital organs of the female. Here the index finger alone is to be employed.

Pressure. This is one of the most useful methods of exploration practiced, and becomes in many of the cases in which it is used, a very certain means of forming a differential diagnosis. It may be made either by the whole hand or by the extremities of the fingers, according to the result to be obtained. In painful affections of the abdominal organs it is much employed, as it furnishes an easy and reliable method of distinguishing pain of a nervous character, from that due to inflammation. The various

alterations in the parenchymatous organs are readily appreciated in this way; as the hardness or softness of the liver, the enlargement of the spleen, &c. Pressure also determines the degree of tension of different parts, the presence of abnormal growths, or of fluids in the abdominal cavity; of gas in the bowels; the accumulation of serum or air in the sub-cutaneous cellular tissue, and the character of the changes that occur on the surface of the body. In this last way it is very useful by discriminating the various eruptions of the exanthematous fevers, both from each other and from accidental discolorations. The common act of examining the pulse of a patient is one method in which pressure is constantly being employed by the physician. Caution is necessary in making pressure that it be not sufficient to injure the structure over which it is made, as the spleen, or other vascular organ.

Succussion is a method of examination rarely employed, from the infrequency of the cases to which it is applicable, and the roughness of the handling to which the patient is necessarily subjected. It may be accomplished either by grasping the shoul-

ders, and moving the body backwards, and forwards; or by placing one hand under each axilla, and giving it motion from side to side. It can only be used to detect the presence of gases and fluids, when they exist in the same cavities. The accumulation of liquid and air in the pleural sac, is the morbid condition to which this variety of physical exploration is best adapted.

Mensuration consists in the application of instruments to the body, by which any departure, from the normal size may be accurately estimated. It is much employed in surgery, especially in diagnosing fractures and dislocations, by comparing the length of the injured member with that of the sound one. In enlargements of the chest from effusion of fluid, and in contraction after chronic pleurisy, it is also used to note the amount of variation from the healthy standard. In abdominal dropsy measurement is frequently employed and continued for a considerable period of time, to indicate the gradual diminution or increase of the effused fluid. Numerous instruments have been invented and used for making examinations of this kind, but the

simplest and probably the best, is a narrow band of some inextensible material. This is most easily procured, and is readily adapted to the persons. In measuring the thorax allowance is generally to be made for the greater development of the right side, and the same points must be measured from in the explorations of different periods. It must also be borne in mind, that if the measurement be made at one time during the act of inspiration, subsequently to this it must be taken during the same act, as otherwise they do not bear a correct relation to each other. In mensuration of the abdomen the same rule must be adopted, and the existence of flatulent distention of the bowels must not be overlooked. In obstetrical practice the dimensions of the pelvis, and the presence of deformities, often render this process necessary, and instruments called pelvimeters have been made for this purpose, but these are now very seldom used, as the index finger of the obstetrician can supply all possible information.

Percussion is the act of stri-

upon the body for the purpose of producing sound. Although known to and practised by the ancients, their knowledge of its value was of an exceeding limited nature, and excluded its most important applications. In the affections of the thoracic, and in many of those of the abdominal organs, it is an agent of the greatest value in the formation of diagnosis, and one whose loss could not be replaced by any other mode of exploration. It is employed to ascertain the increase or diminution of resonance, and an acquaintance with the morbid states capable of occasioning these modifications being previously acquired, the physician derives almost positive knowledge from its use. By percussing the surface of the chest various departures from the normal condition may be detected, some of the principal of which are congestion, solidification of, or the deposition of tuberculous matter in the lungs; the the presence of fluid in the pleural cavities, of air in the proper tissue of the lungs, and enlargement of the heart. The changes in the abdominal organs which are to be discovered, are enlargement of the glandular structures, the distention of the bowels with flatus,

the presence of tumours, and of dropsical effusions. Percussion is made by the ends of one or more fingers, and may be either mediate or immediate. The latter is made by tapping with the fingers immediately over the part to be examined, but is obnoxious to the objection of causing pain to the patient. Mediate percussion which is commonly employed, differs from the immediate in having some substance intervening between the fingers and the body. This is called a pleximiter, and may be of different materials, as wood, ivory, metal, or caoutchouc, but the best is the index or middle finger of the left hand. This is applied over the seat of the suspected disease, and the ends of the fingers of the right hand being brought to the same level, they strike a light, quick blow upon the pleximiter. The hand percussing must not be moved from the elbow, but entirely from the wrist, and in this way can be applied with sufficient force. As in the other methods of exploration, the physician should commence his examination at a distance from the seat of disease and gradually approach it, as he will more readily appreciate the deviation from the natural resonance. If the chest

is to be examined, the patient may be placed in the sitting posture; if the abdomen, he should be supine with the limbs, slightly flexed, to relax the abdominal muscles. To ascertain the presence of fluid either in the chest or abdomen, it may be necessary to vary the position so as to note the change in resonance produced by its gravitation.

Auscultation is a term applied to the process of listening to the sounds of the interior of the body, either by the direct application of the ear, or by the intervention of a conducting medium. Its introduction has produced the most remarkable changes in the certainty of diagnosis in the diseased conditions in which it is used, and here it affords more positive information than any other method of physical exploration. Its employment is almost entirely restricted to the examination of the respiratory and circulatory systems, and the slightest departure from health in either can often be accurately estimated by the ear of the experienced observer. Besides the two systems above mentioned, auscultation has been

used by the surgeon to detect crepitus in obscure fractures, and to determine the existence of vesical calculi; and by the obstetrician to ascertain the presence and life of the foetus in utero. Like percussion, it may be mediate or immediate. In the former the ear is not brought in contact with the patient's body, but the sounds are conducted to it by the instrument called the stethoscope. Neither of these modes can be adopted to the complete exclusion of the other, as there are cases to which each is especially applicable. The stethoscope is preferable where situations are to be explored which cannot be easily reached by the ear, as the axilla, or the hollow beneath the clavicle; where the sounds of a limited space are to be examined, as of the valves of the heart; and where delicacy forbids the direct application of the ear. In all other instances the instrument may be dispensed with, as being at least not more reliable, and certainly less convenient than that provided by nature. When used it is to be placed against the body, and held there by one hand, while the ear is applied

to the opposite extremity. In immediate auscultation, which is most commonly practised, the ear is placed over the part to be examined, and this ought generally to be stripped of all covering, although the intervention of a single light garment frequently does not interfere with the transmission of sound. It is better that both ears be practised in making auscultation, but where this cannot be done, the more perfect one is to be used, and the operator must change his position according to the region to be examined. The patient may be either erect or recumbent, just as the practitioner may wish to auscult the anterior or posterior wall of the chest, but in all cases the muscles of the part are to be relaxed. The general rule of commencing the examination at a distance from the seat of disease, which has been mentioned, is especially to be followed in this variety. The examiner should not assume painful or constrained positions, as they may seriously modify the results to be obtained.

The union of the two last mentioned modes of exploration has of late been recommend-

ed to determine the extent of various organs, the presence of organic change in their structure, and to distinguish one, from another which is contiguous to it. These, the stethoscope is placed over the part, and percussion made near its end, when different sounds are produced, according to the organ over which it is placed.

Other means of exploration are also used, principally the micro-scope and chemical reagents. These however require such extended information, and so much time for their correct elaboration, that they cannot be said to afford much aid in the ordinary practice of medicine.